



2020

# URBAN WATER MANAGEMENT PLAN

City of Huntington Park, CA



# 2020

## URBAN WATER MANAGEMENT PLAN



### **City of Huntington Park, CA**

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# TABLE OF CONTENTS

## Section 1: Introduction

SECTION	Page
1.1 Purpose & Summary .....	1-1
1.2 Coordination .....	1-4
1.3 DWR Updates for the 2020 UWMPs.....	1-6
1.4 Updates to the City's UWMP .....	1-7
1.5 Format of the 2020 UWMP.....	1-8
1.6 Lay Description.....	1-9

## Section 2: Service Area Description

SECTION	Page
2.1 City Background .....	2-1
2.2 Current Water Service Area.....	2-2
2.3 Land Use & Economy .....	2-3
2.4 Climate .....	2-7
2.5 Population .....	2-9
2.6 Water System.....	2-10

## Section 3: Water Sources & Supplies

SECTION	Page
3.1 Introduction .....	3-1
3.2 Water Supply Sources.....	3-1
3.3 Imported Water Purchases.....	3-8
3.4 Groundwater.....	3-11
3.5 Projected Water Supply .....	3-16
3.6 Alternate Water Sources .....	3-17
3.7 Transfers or Exchanges .....	3-17
3.8 Planned Supply Projects .....	3-18

## Section 4: Recycled Water Opportunities

SECTION	Page
4.1 Overview .....	4-1
4.2 Wastewater Collection System.....	4-1
4.3 Recycled Water .....	4-7
4.4 Alternative "Recycled" Water.....	4-13
4.5 Encouraging and Optimizing Recycled Water Use.....	4-13



## Section 5: Water Quality

SECTION	Page
5.1 Overview .....	5-1
5.2 Water Quality Standards.....	5-2
5.3 Quality of Sources.....	5-4
5.4 Impacts of Water Quality.....	5-12

## Section 6: Water Use

SECTION	Page
6.1 Overview .....	6-1
6.2 Recent Statewide Water Use Changes .....	6-1
6.3 City Water Needs .....	6-2
6.4 Climate Impacts on Water Use .....	6-3
6.5 Water Use .....	6-5
6.6 Water Use by Sector .....	6-6
6.7 Water Conservation Act.....	6-8
6.8 Projected Water Demand .....	6-14

## Section 7: Reliability Planning

SECTION	Page
7.1 Overview .....	7-1
7.2 Historic Droughts .....	7-1
7.3 Recent Drought (2011-2017) .....	7-2
7.4 State Water Supply Reliability .....	7-3
7.5 Competition for Water Rights.....	7-10
7.6 City Supply Reliability.....	7-10
7.7 Ensuring Adequate Supply .....	7-25
7.8 WSCP Supply Augmentation.....	7-25
7.9 Water Supply Opportunities .....	7-25

## Section 8: Contingency Planning

SECTION	Page
8.1 Introduction .....	8-1
8.2 Need for Contingency Plans.....	8-2
8.3 Legal Authority.....	8-4
8.4 Water Supply Reliability Analysis.....	8-4
8.5 Annual Assessments .....	8-7
8.6 Regional Contingency Plans.....	8-9
8.7 City Contingency Plan .....	8-10



## Section 8: Contingency Planning (Cont.)

8.8	Disaster Management .....	8-15
8.9	WSCP Enforcement & Evaluation .....	8-20
8.10	Fiscal Impacts .....	8-21
8.11	Three-Year Minimum Supply .....	8-22
8.12	WSCP Adoption and Refinement .....	8-23

## Section 9: Conservation Measures

SECTION		Page
9.1	Overview .....	9-1
9.2	DWR DMMs for 2020 UWMPs .....	9-2
9.3	CalWEP BMPs .....	9-2
9.4	City Conservation Measures .....	9-3
9.5	Other Local Conservation Measures .....	9-12
9.6	Continued Implementation .....	9-13

## Appendices

Appendix A	City Council Resolution Adopting 2020 UWMP
Appendix B	City Council Resolution Adopting 2020 WSCP
Appendix C	UWMP Act
Appendix D	Dept. of Water Resources UWMP Checklist
Appendix E	Dept. of Water Resources UWMP Data Tables
Appendix F	Dept. of Water Resources SBx7-7 Tables
Appendix G	AWWA Water Loss Audits (2016-2019)
Appendix H	Land Use & Community Development Element – 2030 City General Plan
Appendix I	2013-2021 Housing Element – 2030 City General Plan
Appendix J	2020 Consumer Confidence Report (Water Quality Report)
Appendix K	UWMP Notices: 60-Day Notice, 2-Week and 1 Week Notices
Appendix L	LA Basin Adjudication Summary and Central Basin Amended Judgment
Appendix M	Unincorporated Los Angeles County Community Climate Action Plan
Appendix N	City of Huntington Park Natural Hazards Mitigation Plan
Appendix O	Final Transmittals to County and State Library



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# ACRONYMS

AAC	All-American Canal
AF	Acre-Feet
AFY	Acre-Feet per Year
AMI	Automatic Metering Infrastructure
AP	Allocation Plan
BDCP	Bay-Delta Conservation Plan
BMP	Best Management Practice
Central Basin	Central Basin Municipal Water District
CBMWD	Central Basin Municipal Water District
CDP	Census Designated Place
CDPH	California Department of Public Health
CFS	Cubic Feet per Second
CII	Commercial Industrial Institutional
CIMIS	California Irrigation Management Information System
CRA	Colorado River Aqueduct
CUWCC	California Urban Water Conservation Council
CVP	Central Valley Project
CDPH	California Department of Public Health
DBPs	Disinfection Byproducts
DDW	Division of Drinking Water
DMM	Demand Management Measure
DOE	Department of Energy
DWSAP	Drinking Water Source Assessment and Protection
DWR	Department of Water Resources
EPA	Environmental Protection Agency
ETo	Evapotranspiration
GPCD	Gallons per Capita per Day
GPM	Gallons per Minute
HEN	High Efficiency Nozzle
HET	High Efficiency Toilet
HEW	High Efficiency Washer



IID	Imperial Irrigation District
IPR	Indirect Potable Reuse
IRP	Integrated Resources Plan
MBR	Membrane Bioreactor
MCL	Maximum Contaminant Level
MCLG	Maximum Contaminant Level Goal
MG	Million Gallons
MGD	Million Gallons per Day
mg/L	Milligrams per Liter
µg/L	Micrograms per Liter
MOU	Memorandum of Understanding
MWD	Metropolitan Water District of Southern California
ng/L	Nanograms per Liter
NPDWR	National Primary Drinking Water Regulations
NTU	Nephelometric Turbidity Units
PCA	Possible Contaminating Activities
PHG	Public Health Goal
PVID	Palo Verde Irrigation District
QSA	Quantification Settlement Agreement
RHNA	Regional Housing Needs Assessment
SDWA	Safe Drinking Water Act
SB	Senate Bill
SBx7-7	Senate Bill x7-7
SWP	State Water Project
SWRCB	State Water Resources Control Board
TDS	Total Dissolved Solid
TOC	Total Organic Carbon
ULFT	Ultra-Low-Flow Toilet
USFWS	U.S. Fish and Wildlife Service
UWMP	Urban Water Management Plan
WSAP	Water Supply Allocation Plan
WSDM	Water Surplus & Drought Management Plan
WSS	Watershed Sanitary Survey
WWTP	Wastewater Treatment Plant

# Section 1

## Introduction

*Since 1983, the State of California requires urban water agencies to prepare Urban Water Management Plans (UWMPs). The City's 2020 UWMP is a collaborative effort involving its own staff, outside agencies, and the general public.*





## INTRODUCTION

*In accordance with the Water Code, an Urban Water Management Plan is required to be updated every five years.*

### 1.1 PURPOSE AND SUMMARY

This is the 2020 Urban Water Management Plan (“UWMP” or “Plan”) for the City of Huntington Park (hereinafter “City”). This Plan has been prepared in compliance with the Urban Water Management Planning Act (Act), which was established in 1983 and has been codified into the California Water Code sections 10610 through 10657. A copy of the Act can be found in **Appendix C** to this 2020 UWMP.

As part of the Act, the legislature declared that waters of the state are a limited and renewable resource subject to ever increasing demands; that the conservation and efficient use of urban water supplies are of statewide concern; that successful

implementation of plans is best accomplished at the local level; that conservation and efficient use of water shall be actively pursued to protect both the people of the state and their water resources; that conservation and efficient use of urban water supplies shall be a guiding criterion in public decisions; and that urban water suppliers shall be required to develop water management plans to achieve conservation and efficient use.

The Act requires “every urban water supplier providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually, to prepare and adopt, in accordance with prescribed requirements, an Urban Water Management Plan.” These



plans must be filed with the California Department of Water Resources (DWR) every five (5) years, describing and evaluating reasonable and practical efficient water uses, reclamation, and conservation activities. The Water Code mandates that each water supplier shall update its plan at least once every five years on or before July 1, in years ending in six and one.



Figure 1.1: UWMPs are Governed by State Law

The Act has been amended multiple times since its initial passage in 1983. A summary of the amendments is provided in **Figure 1.2** on the following page. The intent of the amendments was to broaden the scope of the UWMPs, encourage public participation, and add financial incentives to the UWMPs. A significant amendment to the Act was a 2009 amendment (Senate Bill SBx7-7) signed by former Governor Arnold Schwarzenegger. The Senate Bill, also known as the “Water Conservation Act” required that per capita water use within an urban water supplier's service area decrease by 20 percent by the year 2020 in order to receive grants or loans

administered by DWR or other state agencies. Each urban retail water supplier developed water use “targets” for 2015 and for 2020. The “target” date for 2020 just passed on December 31, 2020. Urban water suppliers whose 2020 actual water use does not meet the target requirements

*Amendments to the Act have added financial incentives to UWMPs*

established by this bill are not eligible for state water grants or loans. This included, but was not limited to, the following funding sources:

- **Drinking Water State Revolving Fund**  
Primarily a source for funds to help correct deficiencies
- **Proposition 1**  
Primarily a source for funds related to supplies & infrastructure
- **Proposition 50**  
Primarily a source for funds related to security & treatment technology
- **Proposition 84**  
Primarily a source for funds related to protection from pollution

Agencies that submit their UWMPs past the July 2021 deadline are still technically eligible for grants or loans, provided that the UWMP addresses the requirements of the Act. However, applications for such funds are subject to legal challenges coming

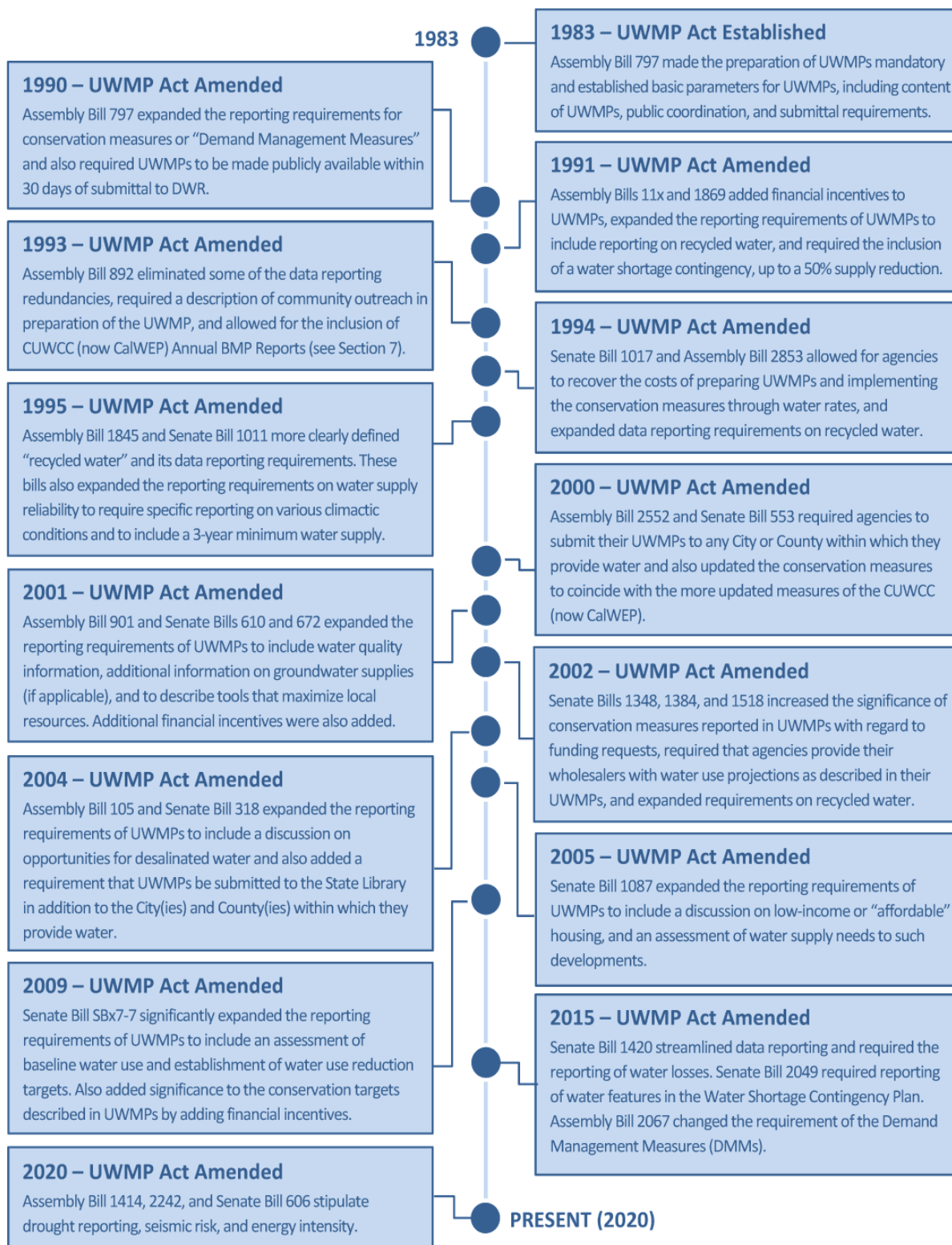


Figure 1.2: UWMP Act Establishment and Amendment



from competing agencies for the same funding, if the competing agencies become aware of the timeframe in which an UWMP was submitted.

UWMPs are considered to be a foundation document and a source of information for Water Supply Assessments (Senate Bill 610) and Written Verifications of Water Supply (SB 221). In addition, an UWMP may serve as a long-range planning document for water supply, a source of data for development of a regional water plan, and a source document for cities and counties as they prepare their General Plans. These planning documents are linked, and their accuracy and usefulness are interdependent.

One of the primary objectives of the Act is the assessment of demands and supplies over a 20-year or a 25-year planning horizon under normal rainfall conditions, as well as under various drought conditions. The Act also requires water shortage contingency planning and drought response actions be included in an UWMP. In short, this Plan is a management tool that provides a general, long-term framework for action, rather than a detailed blueprint for supply and demand management. This Plan evaluates the City's supply and demand projections over a 25-year planning horizon, and what mix of programs should be explored for ensuring that such water will

be available. As part of the City's past and current water conservation policies, the City is currently implementing many facets of this plan already to achieve its water conservation goals.

## 1.2 COORDINATION

The process of preparing and submitting an UWMP is a transparent process that requires opportunities for outside-agency and general public involvement. In preparing this 2020 Plan, the City has encouraged broad public participation. The City notified the agencies that the City interacts with more than sixty (60) days in advance of the City

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*The City's 2020 UWMP is a collaborative effort involving its own staff, outside agencies, and the general public.*

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Council's adoption of the Plan. The City also made the draft Plan available at City Hall and on the City's website, leading up to a public hearing on the Plan. Notices of the public hearing were published in the local press and on the City's website for a two-week period. On May 18, 2021, the City held a noticed public hearing to review and accept comments on the UWMP. Following the public hearing, the City officially adopted the 2020 Plan through Council resolution. A copy of the council resolution adopting this UWMP is included in **Appendix A.**



**Table 1.1**  
**Coordination and Public Involvement**

Agency	Participated in Plan Preparation	Contacted for Assistance	Commented on Draft	Notified of Public Hearing	Attended Public Hearing
City Water Staff	x	x	x	x	x
City Manager's Office				x	x
City Council				x	x
The Metropolitan Water District of Southern California				x	
Central Basin Municipal Water District		x		x	
Golden State Water Company				x	
Water Replenishment District				x	
County of Los Angeles				x	
City of Bell				x	
City of Maywood				x	
City of South Gate				x	
City of Vernon				x	
City of Walnut Park				x	
General Public				x	x

Notes:

1. "60-Day" notice letters were sent out to agencies as required by CWC § 10621(b).
2. 2-week and 1-week notices were published in the local press.
3. Appendix contains copies of the 60-day notice and the 2-week and 1-week notices.



As required by the Act, the 2020 UWMP is being prepared by the City and will be submitted to DWR, the California State Library, and any city or county within which it provides water to no later than 30 days after adoption. The 2020 UWMP will be available to the public during normal business hours within 30 days of submitting the 2020 UWMP to DWR.

### 1.3 DWR UPDATES FOR THE 2020 UWMPs

There have been significant changes to the Water Code affecting the 2020 UWMPs. The changes include the following:

- **Water Reliability Planning:** UWMPs must extend drought planning of water sources (supplies) for periods of up to five (5) consecutive dry years. (CWC § 10635 (a))
- **Drought Risk Assessment:** UWMPs must assess water supply reliability over five (5) consecutive dry years that takes into consideration demands. (CWC § 10635(b))
- **Seismic Risk:** UWMPs must address seismic risks in the Contingency Section in the UWMP, or refer to local or regional hazard mitigation plans. (CWC § 10632.5 (a) (b) and (c))
- **Contingency Plans:** Water Shortage Contingency Plans (WSCPs) must include six (6) Standard Stages CWC § 10632(a)(3)
- **Groundwater Supply Projections:** If a Groundwater Sustainability Plan has been completed by an agency, groundwater pumping projections in the UWMP must be consistent with those Plans. (CWC § 10631(A)(B))
- **Lay Description:** UWMPs must include a less-technical summary of water service reliability, challenges, and strategies which could be read as a go-to synopsis for new staff, new governing members, customers, and the media. (CWC § 10630.5)
- **Energy Intensity:** UWMPs must report on the energy intensity of water supplies. (CWC § 10631.2 (a))
- **Land Use:** UWMPs must include current and projected land uses in addition to population estimates. (CWC § 10631 (a))
- **Water Supply Projects:** UWMPs must include a description of potential water supply projects that may be implemented during droughts of up to five (5) years. (CWC § 10631 (f))



Of the above listed changes to the UWMPs by DWR, the contingency planning changes (i.e., changes to the City's WSCP) are the most significant updates affecting the 2020 UWMPs. These contingency planning changes were written into the Water Code in 2018, in response to the severe drought of 2012-2017. While overlapping aspects of the prior law, the new requirements have several prescriptive elements that a Water Supplier's WSCP must include.

In addition to the above, there are several optional or voluntary categorical and data reporting changes to the UWMP Act. These include an optional Planning Tool that Suppliers can use to report and assess water use and supply in order to better conduct the Reliability Assessment and Drought Risk Assessment, Potable and Non-Potable Planning Tool, and Potable and Non-Potable Submittal Tables, as well as various optional data reporting.

#### 1.4 UPDATES TO THE CITY'S UWMP

In addition to required updates described in the previous section, the City's 2020 UWMP has undergone several changes from the 2015 UWMP. A summary of the key changes to the UWMP are as follows:

- **New Format:** Format of the UWMP has been changed to include a new look and new arrangement of sections. The new arrangement helps the discussion of

certain topics which precede other topics. See **Section 1.5** for the format of this 2020 UWMP.

- **DWR & Water Code:** A listing of DWR-required UWMP updates (see previous Section).
- **City Development Growth:** An updated look at development which took place in the City since the 2015 UWMP.
- **Water Sources and Supplies:** A broader, more in-depth discussion of water sources and supplies.
- **Recycled Water:** An updated look on recycled water opportunities in the South Bay and the City.
- **Water Quality:** A broader, more in-depth discussion of water quality and treatment.
- **Water Use:** Updated information on recent water use quantities and a deeper discussion on water use parameters. Also, an updated look at SBx7-7 targets.
- **Supply v Demand:** Updated information on projected supplies vs demands, and a discussion on recent regional droughts affecting the City. There is also an expansion on the discussion of the City's source water reliability.



- **Contingency Planning:** Updated information on the City's contingency plan, including the City's Ordinances.
- **Conservation Measures:** Updated information on the City's conservation measures, which reflect the previous (2015) changes by DWR.

In addition to the above changes, there are multiple minor changes. The changes reflect both those that are required by the Water Code and those that are voluntarily included for the benefit of the City.

## 1.5 FORMAT OF THE 2020 UWMP

The information contained in this 2020 UWMP correspond to the items in the UWMP Act and other amendments to the Water Code. The sections of the UWMP are as follows:

### Section 1 - Introduction

This section describes the UWMP Act, the UWMP preparation and adoption process, updates to the UWMP, and a lay description of this entire document.

### Section 2 – Service Area Description

This section outlines the history and development of the City and the City's water supply system, a description of its

existing service area, the local climate, population served, and some basic statistics on the City's water distribution system.

### Section 3 – Water Sources & Supplies

This section describes the existing water supplies available to the City, including imported water from the Metropolitan Water District of Southern California (MWD) purchased through Central Basin Municipal Water District (Central Basin) and local groundwater extracted from the Central Basin. In addition, this section discusses potential future water supplies

### Section 4 – Recycled Water Opportunities

This section describes the City's wastewater collection by the Los Angeles County Sanitation District (LACSD), and the uses and benefits to implementing a recycled water system. In addition, this section discusses the future outlook for the City on the possibility of using recycled water.

### Section 5 – Water Quality

This section discusses the quality of the City's potable water supply sources, including imported, surface, and groundwater. This section also discusses drinking water standards and the effect that water quality has on management strategies and supply reliability.



## Section 6 – Water Use

This section describes past, current and projected water usage within the City’s service area. This chapter also discusses the requirement of the Water Conservation Act (SBx7-7), including the 2020 Water Use Targets.

## Section 7 – Reliability Planning

This section presents a drought risk assessment of the City’s water system. The drought risk assessment is an assessment of the reliability of the City’s water supplies by comparing projected future water demands with expected available water supplies under three different hydrologic conditions: normal year; a single dry year; and multiple dry years. This 2020 Plan concludes that if projected imported and local supplies are developed as anticipated, no water shortages are anticipated in the City’s service area during the planning period.

## Section 8 – Contingency Planning

This section describes the City’s response plan to water shortages, as well as those efforts that will be utilized in the event of water supply interruptions, such as power outages, earthquakes, or droughts. This section also describes regional response efforts to water supply interruptions.

## Section 9 – Conservation Measures

This section addresses the City’s compliance with water conservation measures that correspond to the seven (7) Demand Management Measures (DMMs) described in the 2020 UWMP Guidebook, which were previously the 14 DMMs listed in the Act. The DMMs also correspond to the current Best Management Practices (BMPs) from the California Water Efficiency Partnership (CalWEP).

## Appendices

The appendices contain references and specific documents that contain reference data used to prepare this 2020 Plan.

### 1.6 LAY DESCRIPTION

To facilitate effective and efficient management of water supplies, and in compliance with the UWMP Act and the Water Conservation Act of 2009, the City has prepared this 2020 UWMP. This UWMP includes background information regarding the City’s history, water system, and water supplies. This UWMP also analyzes recent water demands and projects future water supply capacity and water demands through 2045. The effects of water quality, drought, and emergencies on the City’s water supply reliability are also analyzed.



As indicated by **Section 7** of this UWMP, the City does not expect to have a water supply shortage through 2045. Furthermore, this UWMP concludes that the City's water supplies, which are obtained from both local groundwater basins and imported water, are resilient to droughts. A basic overview of the City's water system can be found in **Section 2**. Water quality does have an occasional impact on the consistency of groundwater supplies, but due to the City's ability to pump from other wells while water treatment is constructed (i.e. granular activated carbon systems) at the wells of concern.

This UWMP recommends that the City implement water operation management tools that maximize the use of local groundwater production and decrease the need for imported water. This UWMP also recommends conservation tools that will

enable the City's residents to conserve water and maximize water use efficiency. These are described in **Section 9**.

If the water consumption rates in the City decrease as this UWMP projects, the City can expect to have an adequate water supply in future years. This is in spite of potential mild population growth over the next 25 years. Finally, this UWMP recommends that severe droughts or sudden supply interruptions be addressed by following the criteria of the Water Shortage Contingency Plan (WSCP), as described in **Section 8** of this UWMP.

Since UWMPs are due for revision every five years, this UWMP is projected to be in effect until the year's end of 2025. At that time the City's 2025 UWMP will begin development and adoption.

# Section 2

## Service Area Description

*The City of Huntington Park's water service area (pictured) serves about 95 percent of the City's population, with three (3) portions of the City served by other water agencies. The estimated current resident population served by the City's water system is approximately 56,000 persons.*



**SERVICE AREA  
DESCRIPTION**

*The City's total land area is approximately 1,926 acres or 3 square miles.*

**2.1 CITY BACKGROUND**

The City of Huntington Park is centrally located within the greater Los Angeles metropolitan area approximately five miles southeast of downtown Los Angeles in Los Angeles County. The City is bounded on the north by the cities of Vernon and Maywood; on the south by the City of South Gate and unincorporated Los Angeles County; on the east by the cities of Cudahy, Bell, and Maywood; and on the west by the City of Los Angeles and unincorporated Los Angeles County. The City's total land area is approximately 1,926 acres or 3 square miles.

The City of Huntington Park was incorporated on September 1, 1906, with a

population of 526 residents. The City began as a suburban community, providing a centralized location for workers employed in Los Angeles and the surrounding industrial cities of Commerce, Vernon, and South Gate. The City's land use and development patterns were well established by the 1930's, with a thriving downtown centered along Pacific Avenue.

Currently, the City of Huntington Park is a general-law City per the State of California Govt Code § 34102. Per the US Census Bureau, the City qualifies as an "urban area", and falls under the "urbanized area" category which was introduced with the 2010 Census to cover densely populated cities. The City of Huntington Park operates



under a City Council/City Manager form of government. The City Council consists of four Council Members elected to four-year terms, and one Mayor selected to a one-year term. The City Manager, who serves on behalf of the City Council, runs the day-to-day operations of the City. Under the City Manager's general oversight, the City's Public Works Director runs the Public Works Department, which includes the City's Water Division. The City's Water Division performs all activities related to the water system.

## 2.2 CURRENT WATER SERVICE AREA

The City's water system is municipally owned and operated. The Water Sewer Division of the Public Works Department provides potable water and maintains the sewer system throughout the City's service area. The City's water service area comprises about 95 percent of the population residing within the City limits and about 83 percent of the City's Boundaries. A small residential portion in the northeastern corner of the City, making up approximately 4 percent of the City's population, is served by Maywood Mutual Water Company. Another small residential portion in the southern area of the City, making up approximately 1 percent of the City's population, is served by Walnut Park Mutual Water Company. Lastly, a small industrial and commercial portion along the western boundary of the City is served by Golden State Water Company. **Figure 2.4**

shows the City's boundary and the Water Service area.

The City is a retail agency and within the Central Basin Municipal Water District's (Central Basin) service area, which includes 24 cities and unincorporated parts of Los Angeles County. The City of Huntington Park along with the cities of Bell, Commerce, Cudahy, Maywood,

Walnut Park, Monterey Park, Vernon, and unincorporated areas of East Los Angeles constitute Division 3 of the Central Basin's service area. The residents of each

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*The residents of the Central Basin Municipal Water District Service Area elect a representative to their respective division.*

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division elect a representative that serves a four-year term on the five-member Board of Directors, which governs the District policies and activities. As a result of this connection, the City is continually coordinating with Central Basin on its programs.

Water Division staff read water meters bi-monthly for billing purposes, changes damaged water meters in order to keep accurate accounts of water consumed by our customers, and tracks water purchased from Central Basin to ensure proper delivery of purchased water and related billing. The City's Water Division staff are certified by the State of California to operate, maintain and repair the water distribution system, which



includes wells, tanks, and distribution pipelines.

The Water Division's key objectives can be summarized as follows:

- Effectively operate groundwater facilities for consistent water supply
- Collect meter data and provide billing services to customers
- Respond to water quality complaints
- Maintain and make repairs to the water distribution system, including flushing mains and replacing mains
- Comply with California Water Resources Control Board Division of Drinking Water (DDW) regulations, including laboratory testing
- Promote water certification and safety training

Since 2015, the City's water system has been operated and managed by Inframark LLC (formerly known as Severn Trent – North America). Inframark operates the City's wells, maintains pipelines and storage tanks, collects meter readings, and provides customer. Inframark also provides sewer system operation and maintenance services. These services are provided for the City on-site.

## 2.3 LAND USE & ECONOMY

The City of Huntington Park is one of eighty-eight (88) incorporated cities located in Los Angeles County (County). Los Angeles County encompasses a land area of about 4,060 square miles or 2.6 million acres, of which about 1,120 square miles or 716,000 acres consists of urban, developed land. The City is located within what is commonly known as the "Greater Los Angeles Area". The City's downtown is located about 3 miles from downtown Los Angeles, or a driving distance of about 4 miles.



Figure 2.1: Downtown Huntington Park: Pacific Blvd.

**Table 2.1** on the following page provides some basic statistics on current land use and economy for Los Angeles County and the City of Huntington Park. **Figure 2.2** further shows the LA County Area Plan Map, which includes the unincorporated areas and supervisorial districts.



**Table 2.1**  
**Current Land Use & Economic Statistics for LA County and City of Huntington Park**

Land: Total (sq. miles)		
Item	LA County	City of Huntington Park
Land Area (sq. miles)	4,060 sq. miles	3.01 sq. miles
Land Area (acres)	2.6 million acres	1,926 acres
Land: Developed (acres)		
Item	LA County	City of Huntington Park
Developed Land	716,000 acres	1,926 acres
Population		
Item	LA County	City of Huntington Park
Population	10,172,951	59,515
Housing		
Item	LA County	City of Huntington Park
Total Housing Units	3,579,329	15,178
Median Home Price	\$583,200	\$412,500
Owner Occupancy Rate	45.8%	27.2%
Economy		
Item	LA County	City of Huntington Park
Employed (16yrs +)	64.6%	65.2%
Median Household Income	\$68,044	\$42,447
Percent in Poverty	13.4%	23.6%
Economic: Production/Revenue		
Item	LA County	City of Huntington Park
Manufacturing	\$163.8 billion	\$441 million
Agriculture/Crops	\$177.6 Million	N/A
Retail & Wholesale Sales	\$321.2 billion	\$1.02 billion

*\*Not Official City Number. Figure Estimated using GIS Mapping Instruments*

*\*\*Data not Available*



### 2.3.1 City Land Use & Development

The current City of Huntington Park General Plan (2030 General Plan) was recently finalized by the City. As residential housing accounts for the majority of the land use within the City, the Housing Elements are a key part of the City's General Plan. The more-recent updates from the previous General Plan the 2008-2014 Housing Element, which was approved by City Council in January, 2011, and subsequently certified by the State Housing and Community Development Department. The Housing Element was then updated in February 2014, for the period of 2013-2021. This Housing Element has since been updated for the 2030 General Plan, and is contained therein.

As required by State law, the Huntington Park 2030 General Plan contains the following elements: Land Use & Community Development, Mobility & Circulation, Resource Management, Health & Safety, and Housing. The Huntington Park Land Use Element identifies that land within the City's limits is broken down into eight (8) "zone districts" under three (3) major "base zone" districts. These districts are shown on **Figure 2.3** and described as follows:

#### Residential (3 Zones)

- Residential Low (RL)
- Residential Medium (RM)
- Residential High (RH)

#### Commercial (3 Zones)

- Commercial Professional (CP)
- Commercial Neighborhood (CN)
- Commercial General (CG)

#### Industrial (1 Zone)

- Manufacturing Planned Development (MPD)

Other land uses described in the General Plan 2030 but not designated as a one of the "base zones" described above include the following:

- Open Space (OS)
- Public Facilities (PF)
- Transportation (T)
- Downtown Huntington Park Specific Plan (DTSP)

Within each of the zone districts listed above, there are several types of individual developments that are included. For instance, churches are included in the CG Zone and some apartment buildings are included in the DTSP.

The Land Use Element included in the Huntington Park 2030 General Plan was meant to promote an orderly pattern of development in the City, to provide for housing opportunities, to prepare for adequate public services and facilities, and



to ensure a strong employment and commercial base to finance public improvements and services.

### 2.3.2 Recent and Planned Development

The City's land use and development patterns were well established by the 1930's, and has been completely urbanized since the Second World War. New developments that have taken place in the City involved the redevelopment of existing developed parcels. Commercial development is found along the major roadways that traverse the City including Slauson Avenue, Pacific Boulevard, Gage Avenue, Santa Fe Avenue, and Florence Avenue. In addition, small pockets of commercial development occupy the frontages along many of the residential streets. Single-family residential development is found primarily in the southern portion of the City. The northeastern portion of the City is generally occupied by high density residential development. New residential development may occur within properties where the existing land uses are non-residential at the present time.

The City's Housing Element also evaluates the current Regional Housing Needs Assessment (RHNA) developed by the Southern California Association of Governments (SCAG) and indicates how the

City intends to accommodate the future housing demand identified by the RHNA. The RHNA calls for an additional 895 units to be provided during the planning period of the Housing Element.

The City underwent substantial re-development the 1970s and the 1980s which resulted in denser, multi-family housing throughout the City. This nearly doubled the City's population during this time period. Since 1990, the City has only experienced very mild re-development, with a decrease in population in the last 20 years. As for development in the City since the 2015 UWMP, a few highlights include those listed in **Table 2.2** below:

**Table 2.2**  
**Recent Developments in City of Huntington Park (Since 2015 UWMP)**

No.	Development
1	Smart & Final Extra 3111 E Florence Ave.
2	Public Storage & Office Warehouse 6911 & 6901 Alameda St.
3	Alta Med Building 1900 Slauson Ave.
4	Retail Building (Living Spaces) 3046 Florence Ave.

Besides the developments listed in the table above, individual residential lots have been redeveloped. However, there have not been any significant housing structures constructed since the 2015 UWMP.



Regarding future housing developments, the City anticipates only mild re-development of some commercial lots to meet affordable housing needs. The City also anticipates that property owners of apartment buildings may renovate existing apartment buildings.



Figure 2.2: New Alta Med Building

Similarly, individual property owners will likely remodel single-family homes to add additional stories, bathrooms, or “granny units” in the rear of their properties. Combined, the anticipated future housing development should only add a small amount of additional water demands to the City’s water system.

## 2.4 CLIMATE

The City is located within the South Coast Air Basin (SCAB) that encompasses all of Orange County, and the urban areas of Los Angeles, San Bernardino, and Riverside counties. The SCAB climate is characterized by southern California’s “Mediterranean” climate: a semi-arid environment with mild winters,

warm summers and moderate rainfall. The area has average summer temperature of about 77°F with mild winters of about 68°F. The average annual rainfall for the region is 14.8 inches. Evapotranspiration (ET<sub>o</sub>) in the region averages approximately 50 inches annually. Historically, the City receives just under average rainfall than other cities in the region (about 0.2 inch less than the regional average of 14.6). **Table 2.3** lists the historical average rainfall for the City:

**Table 2.3**  
**Historical Climate (1906-2012)**  
([www.wrcc.dri.edu](http://www.wrcc.dri.edu))

Station: Los Angeles Dwtm USC Campus (045115)

Month	Rainfall (in)	Avg. Temp (°F)
Jan	3.2	57.35
Feb	3.38	58.4
Mar	2.4	59.95
Apr	1.01	62.25
May	0.25	64.7
Jun	0.06	68.3
Jul	0.01	72.75
Aug	0.05	73.45
Sep	0.27	72.25
Oct	0.48	68.15
Nov	1.25	63.05
Dec	2.41	58.25
<b>Totals:</b>	<b>14.77</b>	<b>64.9</b>

As the State of California and the LA region has undergone a several-year drought, rainfall has been much lower in the City.



Recent ETo and rainfall data in the past year indicate that rainfall totals for all months, except for March and April, are lower than the normal levels. Southern California is expected to be in a moderate La Nina year for 2021. **Table 2.4** on the following page shows the recent data for the region.

**Table 2.4**  
**Recent Climate Characteristics (2021)**  
CIMIS Station 174 (Long Beach)  
([cimis.water.ca.gov](http://cimis.water.ca.gov))

Month	Rainfall (in)	ETo (in)
Jan (2021)	1.46	2.34
Feb (2021)	0.10	2.91
Mar (2020)	2.88	3.34
Apr (2020)	2.72	4.06
May (2020)	0.03	5.96
Jun (2020)	0.04	5.26
Jul (2020)	0.00	6.62
Aug (2020)	0.01	6.31
Sep (2020)	0.05	4.66
Oct (2020)	0.12	3.51
Nov (2020)	0.23	2.44
Dec (2020)	1.35	2.22
<b>Totals:</b>	<b>9.0</b>	<b>49.63</b>

It is important to note that despite the recent drought, local rainfall has limited impacts on groundwater replenishment within the City. In general, water that

infiltrates into the soil may enter groundwater aquifers. However, due to the large extent of impervious cover in southern California, rainfall runoff quickly flows to a system of concrete storm drains and channels that lead directly to the ocean. To mitigate the loss of groundwater recharge to the underlying aquifers, the Los Angeles County Department of Public Works (LACDPW) operates stormwater capture and replenishment activities at the San Gabriel River Spreading Grounds and Rio Hondo Spreading Grounds which contribute to the Central Groundwater Basin. Replenishment of the groundwater basin occurs through recycled water and untreated imported water managed by the Water Replenishment District of Southern California (WRD).

#### 2.4.1 Climate Change

The DWR Guidebook encourages water suppliers to include a discussion of climate change in their UWMPs. The Los Angeles County Community Climate Action Plan (CAP), assesses greenhouse gas emissions, establishes an emissions reduction target, and outlines strategies to meet these goals. The County's CAP is available online and is also included in the Appendix of this UWMP.

The California Adaptive Planning Guide (2012) projects possible temperature increases throughout the South Coast



region. By 2050, average temperatures in the South Coast region could increase by 2.5°F. The annual number of extreme heat days (with temperatures of more than 105°F) could increase from the current number of roughly 10 to nearly 30 by 2050. Similarly, precipitation could decline by a few inches per year in 2050. Public health and safety and sensitive species could be impacted by climate change. As noted on Page 4-3 of the City's CAP lists five (5) planning strategies for mitigating climate change impacts on residents, businesses, agriculture, etc. Due to the City's proximity to the coast, the City is not as susceptible to the effects of climate change compared to inland agencies. In addition, the use of groundwater provides additional water supply reliability for the City. Climate-related impacts on water supplies are discussed in **Section 7**.

## 2.5 POPULATION

According to the most recent population figures from the California Department of Finance (DOF), the current 2020 resident population of the City is approximately 59,515 persons. Since the City's service area accounts for about 95 percent of the City's total residents, the total current resident population served by the City's water system is approximately 56,539 persons. This is the lowest population for the City since 2014, but is very close to the population of 56,660

in 2019. The City experienced a peak population of 58,843 in 2012, based on DoF estimates. **Table 2.5** below lists the City's recent and current (2020) populations:

**Table 2.5**  
**City of Huntington Park Current Population**

Year	Service Area Population	Citywide Population
2015	56,759	59,746
2016	56,825	59,816
2017	56,783	59,772
2018	56,759	59,746
2019	56,660	59,642
2020	56,539	59,515

The City is a fairly prominent commercial center for the region, and daytime population estimates are partially higher than the City's resident population. On average over the last five (5) years commercial users accounted for about 26% of the City's total water usage.

### 2.5.1 Population Projections

#### *City Population Forecasts*

Due to decrease in growth since 2014, an average growth rate from 2010 to 2020 (about 0.24%) was used to project population for the City. This is in line with the latest Southern California Association of Governments (SCAG) Projections. Since the



majority of new developments will be apartments/condos, it is approximated that an average of 2-3 people per unit, or 2.5 people per unit will be added for any projected housing developments (i.e. affordable housing units). Table 2.6 below shows the projected population for the City.

**Table 2.6**  
**Population Projections**

Year	Service Area Population	Citywide Population
2025	57,209	60,220
2030	57,879	60,926
2035	58,549	61,631
2040	59,219	62,336
2045	59,889	63,041

As mentioned in the 2030 Housing Element, RHNA anticipates an additional 895 units to be constructed. Thus, there will be an additional 2,238 people by 2025 ( $251 \times 2.5$ ) by 2045. These people are included in the population projections listed above.

### ***Regional Population Forecasts***

The SCAG periodically forecasts population growth for incorporated and unincorporated areas within Southern California. In its latest forecast prepared in 2020, SCAG forecasted a 2045 population for the City of Huntington Park at 64,000. This is only a difference of about 1.5 percent, or 960 persons, from the projection for 2045 shown in **Table 2.6**.

## **2.6 WATER SYSTEM**

A basic overview of the City's water system is provided herein. More information on the City's water sources, water treatment, and water demands can be found in **Sections 3 through 6** of this report. As this report is more of a water-resource-management planning document, it does not provide a great degree of technical or engineering detail on water system components.

### **2.6.1 City Water System Overview**

Overall, the City's water system consists of the following components:

- Imported Water
- Groundwater supply wells
- Water distribution pipeline network
- Water storage facilities
- Booster stations
- Emergency interconnections

A brief description of the City's overall water system components is provided below.

### **2.6.2 Imported Water**

The City's imported water supply is delivered through its connection to Central Basin, which receives water from MWD's Feeder



System that is fully treated at three (3) MWD water treatment plants:

- Weymouth Plant in Laverne.
- Jensen Plant in Granada Hills
- Diemer Plant in Yorba Linda

Both the Weymouth and Diemer Treatment plants receive and treat water from the Colorado River Aqueduct and the State Water Project (California Aqueduct). The Jensen plant only treats water from the State Water Project. The City receives imported water from one (1) imported connection with Central Basin, which is located on the northwest side of the City. MWD has no restriction on the amount of water that the City receives through this connection.



Figure 2.3: Weymouth Treatment Plant

The City only has one (1) pressure zone in the City's service area, which is maintained by booster stations due to the flat grade of the City. The booster stations aren't utilized for imported water. Rather, the City's connection to Central Basin involves a pressure regulating station.

### 2.6.3 Groundwater

The City of Huntington Park produces groundwater from four (4) active wells (Well 12, 14, 16, & 18). Based off the City's Water System Detail Report, Wells 9, 10, 11, and 17 are all inactive or abandoned. Well 9 is located at the City's Public Works Yard, and is abandoned. Well 18 was constructed in 1993 near the location of Well 9, in order to replace it. For a full list of the City's groundwater wells and their respective pumping capacity see **Table 2.7**.



Figure 2.4: TCE and GAC Treatment at Well 15

The City has the ability to lease water rights from local groundwater purveyors that are unable to extract groundwater for various reasons. The City has leased water rights in the past, but has not in recent years. This water is used to supplement local groundwater pumping rights that the City is currently allotted and decreases reliance on imported water. Leased water rights are short-term transfers as they are renewed on an annual basis. Currently, there are no additional transfer or exchange



opportunities due to capacity limitations. The City is planning to lease water rights in the near future after system improvements can accommodate increased pumping.

Localized water treatment varies by well site, with chlorination treatment at all active wells. The City also maintains other, specialized forms of treatment as follows:

- Well 15: Trichloroethylene (TCE) and Granular activated carbon (GAC) system
- Well 17: Carbon tetrachloride (CTC), nitrate, and Granular activated carbon (GAC) system

Well 15 is currently offline pending an improvement project that will be complete by 2022. Well 17 is currently inactive, pending site improvement planning for necessary treatment alternatives to return well 17 to service.

#### 2.6.4 Distribution System

The City distributes water to residential, commercial, and other customers through approximately 6,650 service connections using a 50.2-mile network of distribution mains ranging from 4 to 16 inches in size. The majority of the current distribution pipes were installed nearly 100 years ago. The water system consists of one (1) pressure zone that provides modified pressure to

customers. The water service area and zoning map are shown in **Figures 2.4 and 2.6** at end of this Section.

#### 2.6.5 Water Storage

For storage needs, the City of Huntington Park maintains nine (9) operating reservoirs with a combined storage capacity of 6.89 million gallons (MG). **Table 2.8** on the following page provides full list of the City's reservoirs and their respective capacities.

#### 2.6.6 Booster Stations

The City of Huntington Park maintains and operates fourteen (14) booster stations at six (6) groundwater well locations throughout its service area. Some of the booster stations at Well 17 are currently offline.



Figure 2.5: Booster Pump 14 at Well 14

**Table 2.7** on the following page provides a full list of the City's booster stations and their respective pumping capacities.



### 2.6.7 Emergency Interconnections

In addition to its imported water connection with Central Basin, the City's water system has seven (7) emergency connections. During emergencies these seven connections allow water to flow in to and from the City's water system through an isolation valve. When flowing in the City ensures the pressure of the mains. The City's emergency connections consist of the following:

#### **Tract 349 Mutual Water Company**

Located 400 feet east of Salt Lake Ave.  
Up to 250 gpm capacity.

#### **Maywood Mutual Water Company No. 1**

Located 250 feet east of Maywood Ave.  
Up to 350 gpm capacity.

#### **Walnut Park Mutual Water Company**

Located at Florence Ave & Mountain St.  
Up to 400 gpm capacity.

#### **Southern California Water Company**

Two (2) Florence/Graham: Located at:

1. State St and 60th St.  
Up to 350 gpm capacity
2. Gate Ave and Salt Lake.  
Up to 350 gpm capacity

#### **City of South Gate**

Located on Santa Ana and Salt Lake.  
Up to 2,000 gpm to or from the City.



**Table 2.7**  
**System Facility Summary – Pump Capacity**

Location (Water Yard)	Well	Well Capacity (GPM)	Booster Pump
Santa Ana	12	1,400	12
Randolph	14	1,300	14
Cottage	15	1,300	11 & 15
Bissell	18	1,800	Bear Booster Pumps
Slauson	17	2,185	1, 2, 3, 4, & 5
Bear	Bissell Well	N/A	8, 9, & 10
Salt Lake	16	1,225	6 & 7
<b>Total</b>	<b>6</b>	<b>9,210</b>	<b>14</b>

Note: Rows in red (if any) represent Wells and Booster Pumps that are currently offline.

**Table 2.8**  
**System Facility Summary – Storage**

Location (Water Yard)	Type	Quantity	Capacity
<b>Active Storage Reservoirs</b>			
Santa Ana	Ground Concrete	1	396,000
Bear	Ground Concrete	1	3.0 MG
Randolph	Ground Concrete	1	396,000
Cottage	Elevated Steel & Ground Steel	2	1.6 MG
Salt Lake	Ground Steel	1	1.5 MG
<b>Total</b>		<b>7</b>	<b>6.90 MG</b>

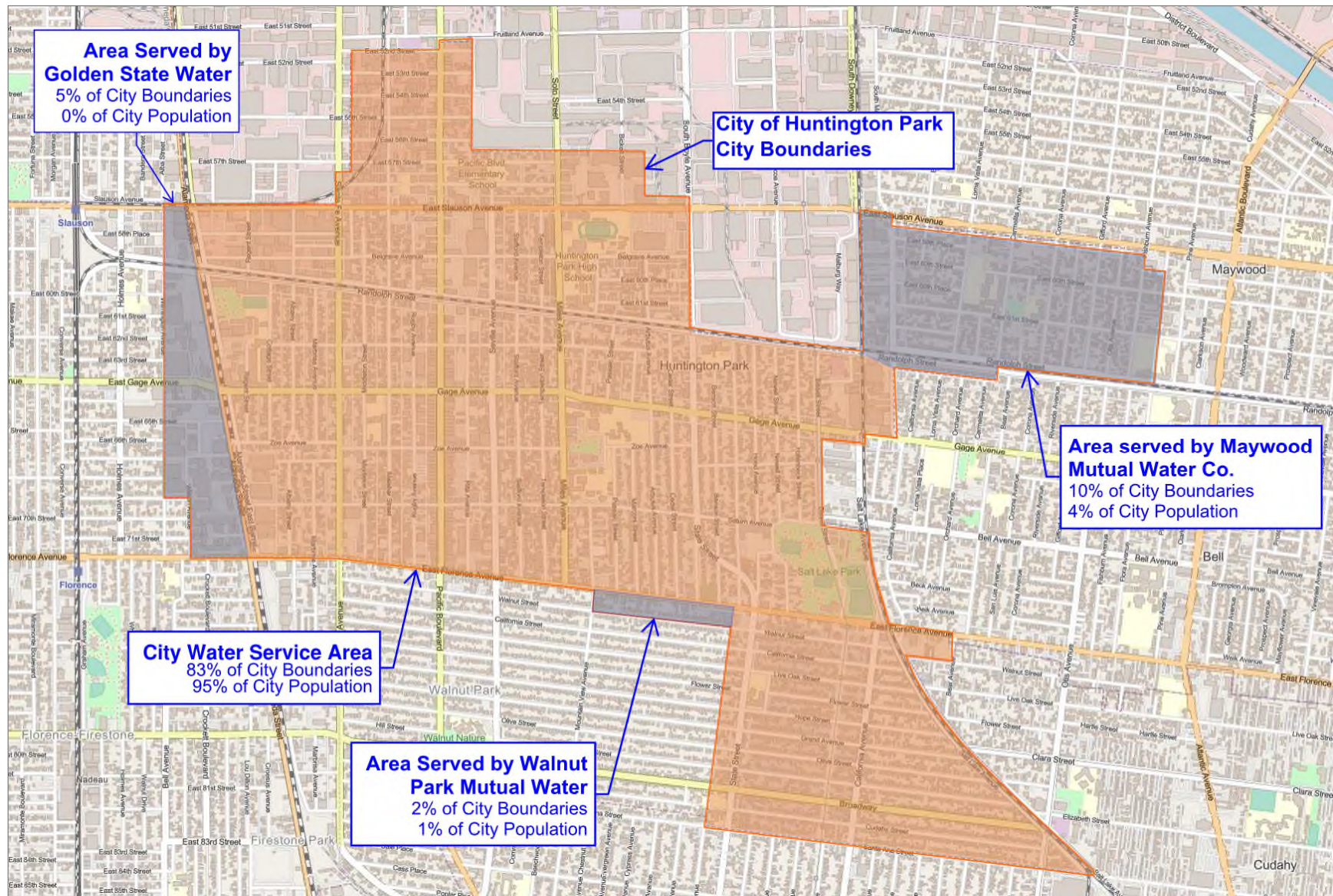


Figure 2.6: City of Huntington Park Water Service Area

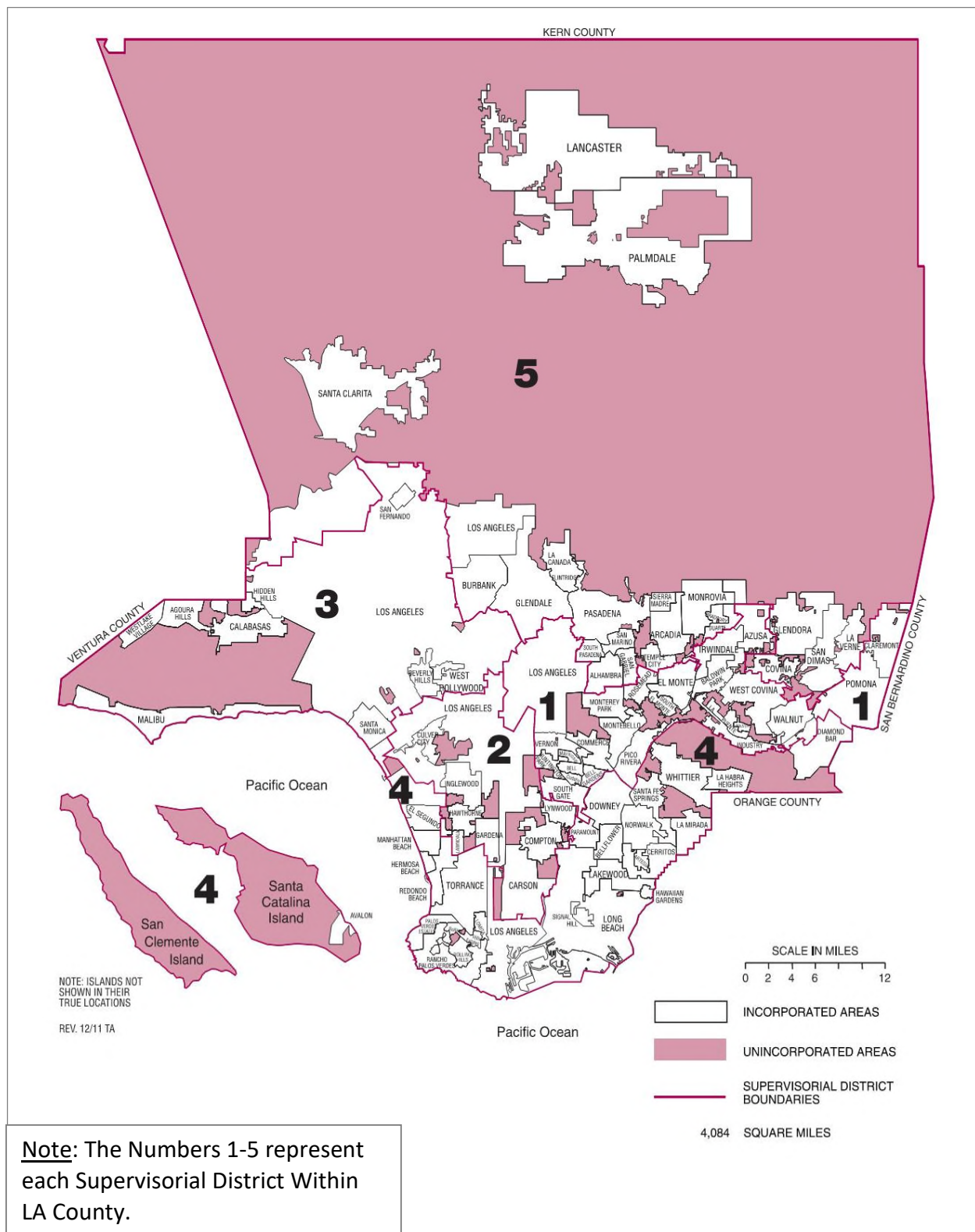


Figure 2.7: LA County Area Plan Map (from LA County Official Website)

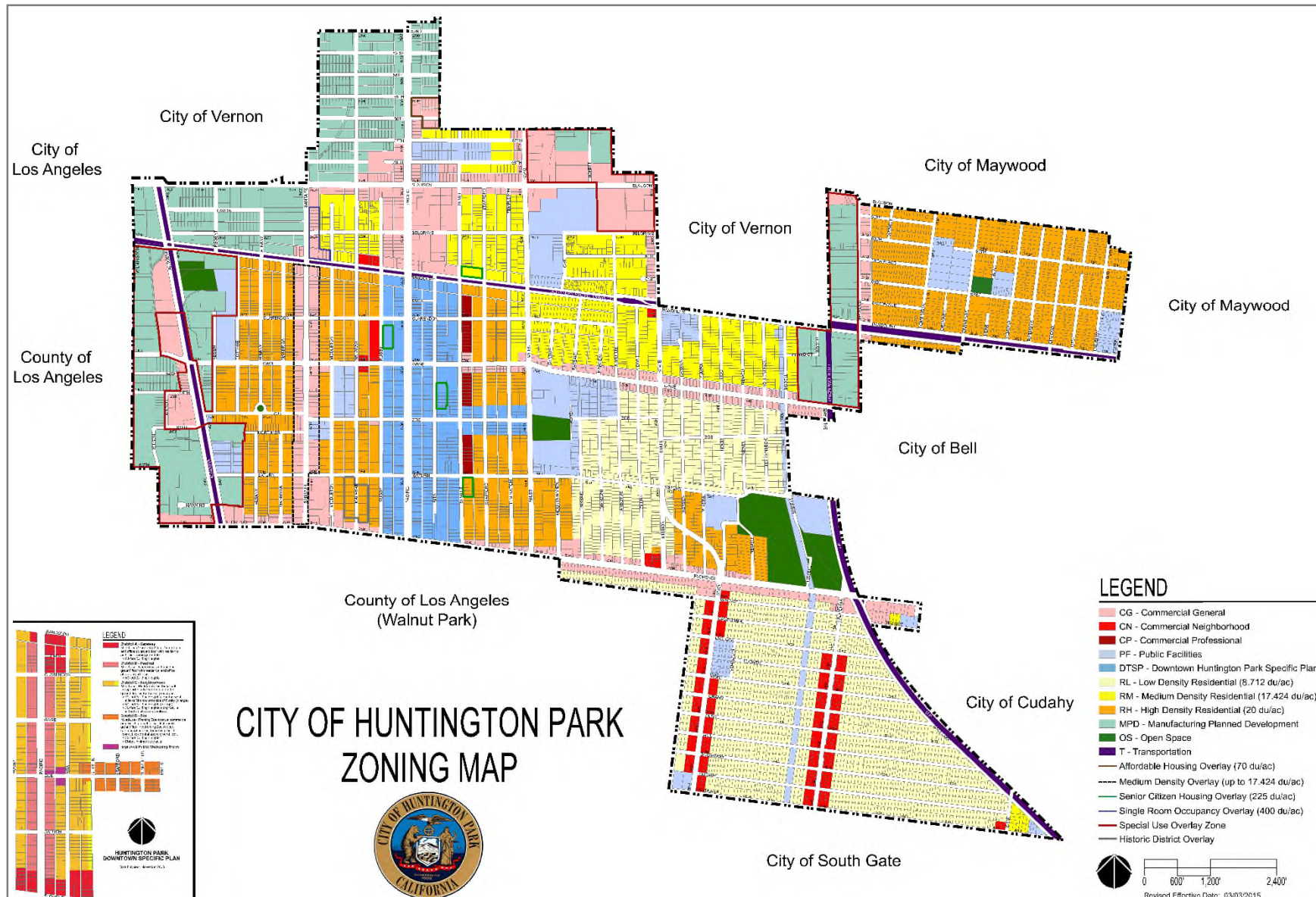


Figure 2.8: City of Huntington Park Zoning Map



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# Section 3

## Water Sources & Supplies

*The City's Water Supply Sources Consist of Imported Water from Central Basin Municipal Water District (CBMWD) and groundwater pumped from the Central Groundwater Basin through five (5) wells, including Well No. 14 (pictured).*





## WATER SOURCES & SUPPLIES

*The City's water supply consists of imported water and groundwater from the City's five wells.*

### 3.1 INTRODUCTION

This section describes the current and projected potable water resources available to the City over a 25-year period. The City currently uses potable water to meet the needs of its water service area. Potable water includes both local water sources and imported water sources. Local water consists of groundwater pumped from the Central Groundwater Basin (Central Basin) from the City's five (5) wells. Imported water consists of water the State Water Project (SWP) which originates from the Bay-Delta region of Northern California, and the Colorado River Aqueduct (CRA), which originates from the Colorado River. Imported water is provided to the City from

the Central Basin Municipal Water District (Central Basin), which is received from the Metropolitan Water District (MWD).

This Section describes the current and projected water resources available to the City over a 25-year period (through 2045). This Section also provides some background information on the overall water supplies available to the region.

### 3.2 WATER SUPPLY SOURCES

#### 3.2.1 Imported Water

The City's imported water originates from the Colorado River and the Sacramento-San Joaquin River Delta in Northern California.



These two water systems provide Southern California with over 2 million acre-feet (MAF) of water annually for urban uses.

### ***Colorado River***

The Colorado River supplies several states with a valuable source of water, including Colorado, Utah, Nevada, Arizona, & California. Approximately 40 million people are dependent on water from the Colorado River for agricultural, industrial, or domestic needs. Most of the river's water source is produced during winter seasons, with snow above 5,000 feet and rainfall at lower elevations in the Rocky, Uinta, and Wind River Mountains. The snowmelt and rainfall occurring in and nearby these mountains are the primary origination or source point of the Colorado River's water. Prior to the construction of major dams and canals, the Colorado River dumped about 16.3 MAF, or 5.3 trillion gallons, of water into the Gulf of California on an annual basis. The river is also historically known to be very volatile, with summer flows, known for their flood potential, far surpassing winter flows by margins of over 50 to 1. Historically, this volatility was the cause of flooding concerns for the areas lying within the floodplain of the river.

The right to water from the Colorado River is governed by numerous compacts, state and federal laws, court decisions and decrees, contracts, and regulatory

guidelines collectively known as the "Law of the River." These documents apportion the water and regulate the use and management of the Colorado River among the seven basin states and Mexico.

From the Boulder Canyon Act of 1928, California's allotment from the Colorado River is about 4.4 MAF annually. Most of this (approximately 3.85 MAF) is used for agriculture in Imperial and Riverside Counties. The remaining unused portion (600,000 to 800,000 acre-feet (AF)) is used for urban purposes in MWD's service area. MWD was established around this time period to obtain an allotment of Colorado River water, and to construct and operate the Colorado River Aqueduct.



**Figure 3.1: MWD Pumping Plant at Colorado River**

The Colorado River Basin has been experiencing a prolonged, drought, where runoff above Lake Powell was below average for twelve of the last sixteen years, prior to the 2015 UWMP. In the last 20 years, runoff in the Colorado River Basin into





Lake Powell has been the lowest on record. While runoff returned to near normal conditions during 2008-2010, the drought returned in 2012 with runoff in 2012 being

among the driest in history. Average flows in the lower basin from 2000 to 2018 have averaged 12.4 MAFY, down from the historical average of about 15 MAFY. During these

*During these drought conditions, Colorado River system storage has decreased to 50 percent of capacity.*

drought conditions, Colorado River system storage decreased to 50 percent of capacity. The Colorado River Basin continues to observe severe drought conditions, which are explained in more detail in **Section 7**.

### **Bay Delta**

In addition to the Colorado River, the Sacramento-San Joaquin River Delta provides a significant amount of supply annually to Southern California. The Delta is located at the confluence of the Sacramento and San Joaquin Rivers east of the San Francisco Bay and is the West Coast's largest estuary. The Delta supplies Southern California with over 1 MAF of water annually which has been significantly reduced in recent years.

The Delta is often considered the nexus of

California's statewide water system. About half the total river flow in the State passes through this region, from which water is exported to the San Joaquin Valley, Southern California and portions of the Bay area to supply some 1,130,000 acres of farmland and 23 million people in central and Southern California. The Delta provides an estimated 7 MAF of water per year, of which about 100,000 AF are exported to the San Francisco Bay Area, 1.7 MAF are used locally, and over 5 MAF are exported to the San Joaquin Valley, coastal Central and Southern California via the State Water Project.

### **3.2.2 Aqueduct Systems**

#### ***Colorado River Aqueduct***

In order to provide Southern California imported water, two separate aqueduct systems (one for each source of supply) are utilized to obtain supplies. These two aqueduct systems convey water from each source into separate reservoirs whereupon the water is pumped to one of several treatment facilities before entering MWD's distribution system. One of these aqueduct systems is known as the Colorado River Aqueduct (CRA), and the other is known as the California Aqueduct or the State Water Project (SWP). The CRA is managed by MWD and the SWP is managed by DWR.



Figure 3.3: Sacramento-San Joaquin Bay Delta



The idea for the CRA initially began in the early 1920s. As a result of the growing water needs of the Los Angeles area, MWD was formed in 1928. The CRA was considered to be the first order of business shortly after MWD's incorporation. MWD initially considered eight different routes for the CRA, but ultimately the existing route was chosen since it was the safest and most economical. Construction began in 1933 after a \$220 million bond was approved in 1931. The CRA is 242 miles long and consists of open channels, tunnels, and pipeline, two reservoirs, and five pumping stations. At the pumping stations, water is lifted up to 400 feet in order to account for the elevation differences. The CRA carries water from the Colorado River at the Parker Dam to Lake Matthews.

### **State Water Project**

The California State Water Project is a water storage and delivery system of reservoirs, aqueducts, power-plants and pumping plants. Its main purpose is to store water and distribute it to 29 urban and agricultural water suppliers in Northern California, the San Francisco Bay Area, the San Joaquin Valley, the Central Coast, and Southern California. Of the contracted water supply, 70 percent goes to urban users and 30 percent goes to agriculture.

In 1947, the California State Legislature

funded a water resources investigation that led to the development of the SWP. This investigation resulted in the publication of the California Water Plan, which presented preliminary plans to meet the State's ultimate water needs, including those facility works required for transferring surplus water from northern California to water deficient southern California.

Financing for the construction of SWP facilities was authorized in 1959, when the State Legislature enacted the California Water Resources Development Act (known as the Burns-Porter Act). The Burns-Porter Act, formally known as the California Water Resources Development Bond Act, was placed on the November 1960 ballot. Also known as Proposition

One, the initial works included Oroville Dam and Lake Oroville, B.F. Sisk San Luis Dam and San Luis Reservoir, the South Bay Aqueduct, the North Bay Aqueduct, and the

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*The State Water Project or "SWP" is a result of decades of planning and construction dating back to the 1940s.*

---

California Aqueduct. Construction on the Oroville site actually began even before the passage of the Burns-Porter Act. A \$25 million emergency appropriation was passed in 1957 after a record late 1955-early 1956 flood, which devastated Northern and Central California. Statewide, 64 deaths were recorded, most in Sutter



Figure 3.4: Aqueduct Systems in California



**Figure 3.5: State Water Project**

County and Yuba City, and more than \$200 million of property damage

The first SWP water deliveries were made in 1962, two years after construction began. The State of California Department of Water Resources (DWR) and MWD signed the first water supply contract in 1960. Today 29 agencies have long-term water supply contracts with DWR. The service areas of these long-term water supply contractors vary widely in size, location, climate, and population. The contractors' uses for SWP water also differ. In the San Joaquin Valley, SWP water is used primarily for agriculture; in the Feather River area,

San Francisco South Bay, the North Bay areas, and in Southern California, SWP water is used primarily for urban and industrial needs.

Today, the SWP includes 34 storage facilities, reservoirs and lakes; 20 pumping plants; 4 pumping-generating plants; 5 hydroelectric power plants; and about 701 miles of open canals and pipelines. The SWP is owned and managed by the Department of Water Resources (DWR).

### **3.3 IMPORTED WATER PURCHASES**

As a wholesale agency, MWD distributes



Figure 3.6: MWD Service Area Map

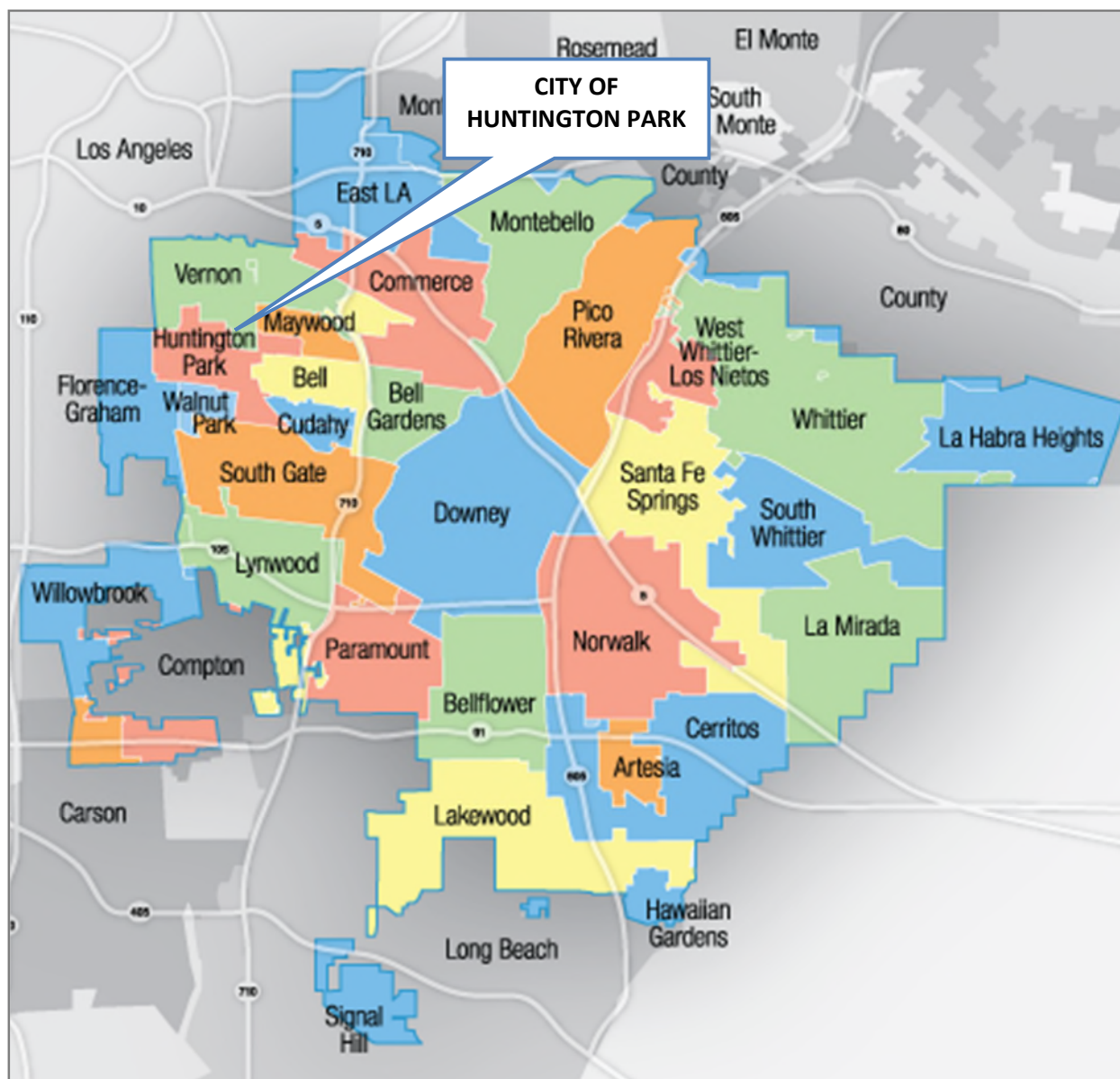


Figure 3.7: Central Basin Service Area Map



imported water to 26 member agencies throughout Southern California as shown in **Figure 3.5**. Central Basin is one of 11 wholesale agencies served by MWD. Central Basin distributes water to its 24 retail agencies, including the City of Huntington Park, as shown in **Figure 3.7**. The City has one (1) imported connection to Central Basin with a capacity of 10 cfs (about 7,200 acre-feet per year (AFY) if operated continuously). **Table 3.1** presents the City's recent imported water purchases from Central Basin for years 2016 to 2020:

**Table 3.1**  
**Imported Water Supply 2016 to 2020**  
**(Purchases from Central Basin)**

Year	Purchases (AF)
2020	1,332
2019	1,192
2018	726
2017	131
2016	1,080
<b>Average:</b>	<b>892</b>

Although the City's imported connection capacity is about 7,200 AFY, the amount of imported water available to the City is dependent on Central Basin's available supply from MWD. For most years, there would be no limit to the City other than the physical restriction of the connection (7,200

AFY). Under shortage conditions however, Central Basin could limit volumes by implementing MWD's Water Supply Allocation Plan (WSAP). The most recent allocations estimated by Central Basin under a WSAP scenario were about 1,100 AFY. This would apply to the City under a shortage scenario.

### 3.4 GROUNDWATER

The City obtains its groundwater supply from the Central Groundwater Basin, from which the City has rights to extract 3,853 AF of groundwater annually. The basin is located in western Los Angeles County and underlies all or portions of 24 cities in the central Los Angeles County region. The Basin has a surface area of nearly 280 square miles of flat to hilly terrain. The basin is bounded by the La Brea High to the North, by the Elysian and Puente Hills to the East, by the Newport Inglewood fault to the West, and by the Coyote Creek to the South. Adjacent groundwater basins include the Santa Monica, Hollywood, West Coast, and Orange County Basins as shown in **Figure 3.8** on the following page.

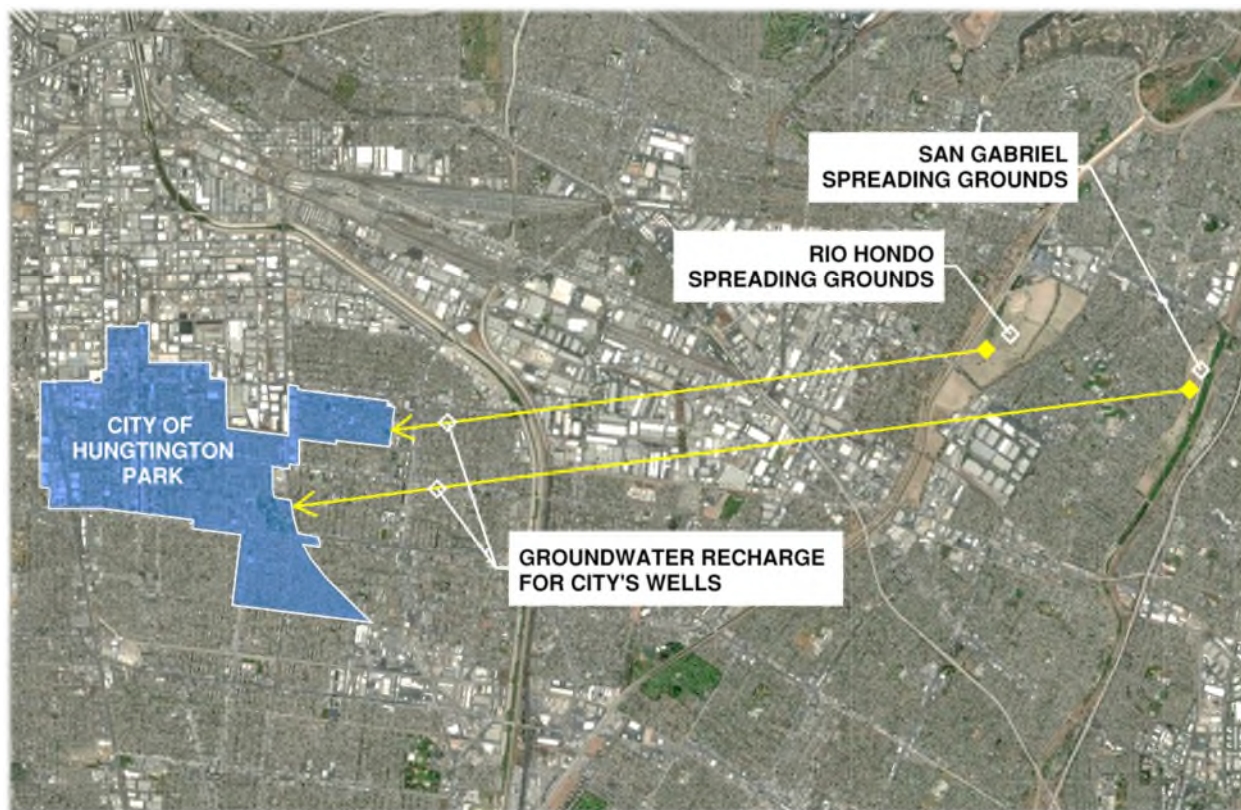
Water-bearing formations in the Central Basin are divided into four (4) sub-areas known as forebays and pressure areas. The two (2) forebays are unconfined aquifers capable of receiving surface recharge, whereas the two (2) pressure areas receive



**Figure 3.8: Central Groundwater Basin**

recharge only from the up-gradient forebays in the basin. The City is located partially in the Los Angeles Forebay and partially in the Central Pressure Area, such that a portion of the City's groundwater aquifers receive recharge only from the adjacent Montebello Forebay. The aquifers include the Gaspur, Gardena, Gage, Lynwood, Silverado, and Sunnyside aquifers, which range from 200 feet to 1,000 feet in depth. The aquifer thickness ranges from 60 feet to 350 feet. Groundwater in the Basin is replenished naturally by percolation from precipitation,

by subsurface inflows from the East and by infiltration of surface inflows from the Los Angeles and San Gabriel Rivers. However, due to urban development, natural replenishment to the basin's aquifers is limited to only portions of basin soils. Therefore, the Basin receives additional replenishment through nearby spreading grounds and injection wells. In particular, the Basin has been artificially replenished through the San Gabriel River and Rio Hondo Spreading Grounds which and Rio Hondo Spreading Grounds which are owned and operated by the Los Angeles County



**Figure 3.9: Groundwater Recharge in Central Basin**

Department of Public Works (LACDPW). Currently, about 40,000 AFY of imported water and 50,000 AFY of recycled water are used for groundwater replenishment. Total natural and artificial replenishment in the Basin amounts to 200,000 AFY, with a net outflow to the West Coast Basin of about 8,000 AFY. Total storage in the basin is estimated to be approximately 13.8 MAF, with 1.1 MAF of unused storage. The safe yield in the basin is approximately 126,000 AFY, with allowable pumping at 217,000 due to artificial recharge of the Basin.

Groundwater flow in the basin is generally from east/northeast towards the west/southwest, with outflow from the

Central Basin into the West Coast Basin. Lower aquifers typically do not provide as much outflow into the West Coast Basin, due to the Newport-Inglewood Fault which produces uplift in the aquifers. Thus, during drier months when groundwater pumping increases, outflows into the West Coast Basin are typically less than during the wetter months.

Due to the potential for seawater intrusion, from the West Coast Basin, there are three (3) seawater intrusion barriers to prevent seawater intrusion into the Central Basin, including the West Coast Barrier Project, the Dominguez Gap Barrier Project, and the Alamitos Gap Barrier Project. The Alamitos

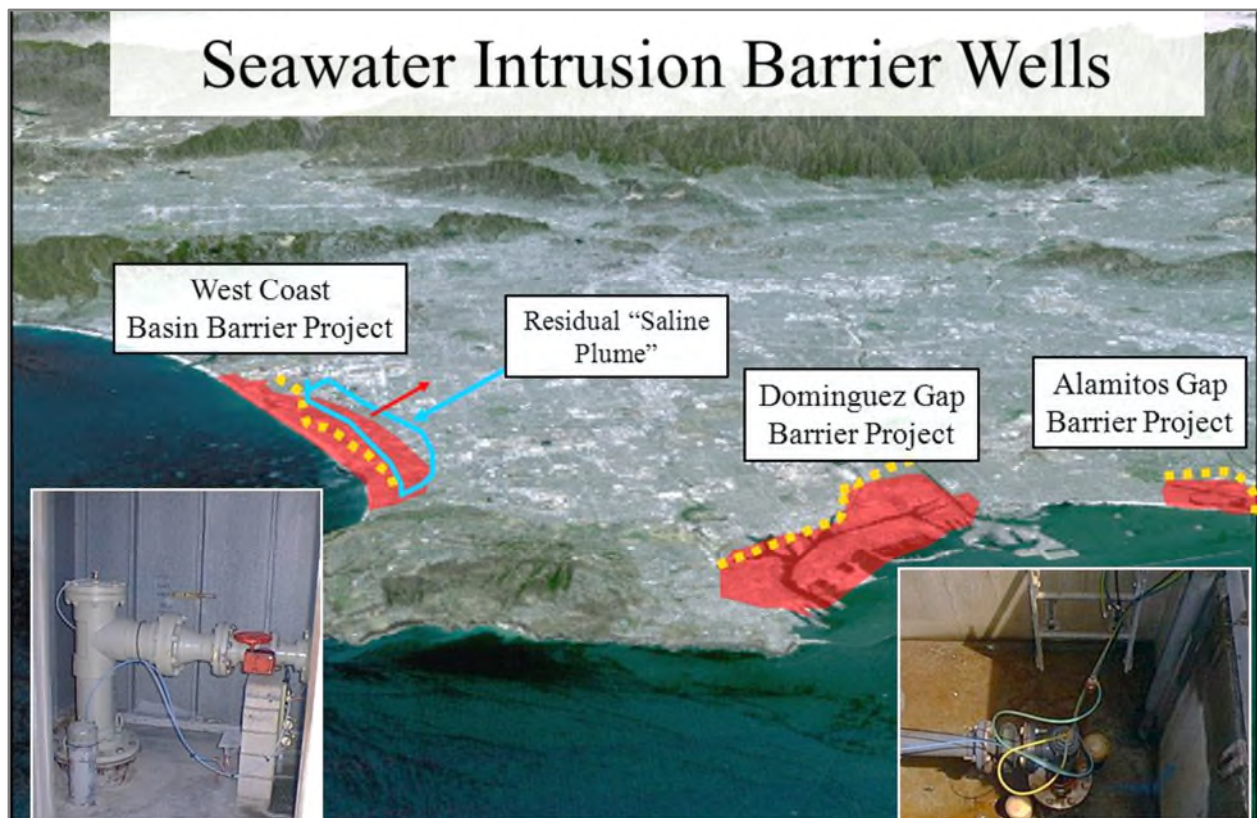


Figure 3.9: Seawater Intrusion Barriers

Gap Barrier Project is located in the southerly tip of the Central Basin, and consists of a series of injection wells aligned to form a subsurface freshwater pressure ridge. The barrier has been incrementally expanded over its nearly 60-year operation from the initial 14 injection wells to the current 41 wells as basin pumping demand increased and groundwater flow conditions changed.

As mentioned previously, the City has rights to pump 3,853 AF of groundwater annually. These rights have been given to the City under the Central Basin Judgment, which became effective in 1966. Since then, the Judgment has been amended three times.

The most recent amendment The Third Amended Judgment became effective in December, 2013. This amendment allows water rights holders to have direct input into how the Judgment is administered and enforced. The amendment confirms the retirement of DWR as the Watermaster and mandates the creation of a new Watermaster with three separate bodies serving different functions. The Water Replenishment District (WRD) acts as the administrator, and effectively the Watermaster for the Basin. The amendment also permits a groundwater rights holder to store water (e.g. through stormwater infiltration) and subsequently extract that stored water without the extraction



counting against its water rights and without having to pay the Replenishment Assessment, provided regular monitoring is performed to determine the actual amount of recharged water, among other provisions.

The key characteristics of the Central Basin are summarized below in **Table 3.2:**

**Table 3.2**  
**Central Basin**  
**Summary of Characteristics**

Item	Amount
Max. Depth to Groundwater	2,000 ft.
Thickness of Aquifers	180-1,050 ft.
Storage	13.8 MAF
Natural Safe Yield	125,805 AFY
Adjudicated Rights	217,367 AFY
City of Huntington Park Rights	3,853 AFY
Spreading Basins (Total)	2
Injection Wells	Multiple Locations
Seawater Intrusion Barriers	1
Desalters	0

According to the 2019 Central Basin Watermaster Report by WRD, which acts as the Watermaster for the Central Basin, a total of 83,660 AF of water was spread in the basin last year, and a total of 16,923 AFY of water was put into storage.

### 3.4.1 City Wells

The City maintains four (4) active wells and two (2) inactive wells, one of which is temporarily offline pending an improvement project. The City's wells are summarized as follows:

- **Well No. 12 – 1,400 gpm**  
Santa Ana St. & Salt Lake Ave.
- **Well No. 14 – 1,300 gpm**  
Randolph St. & Bissell St.
- **Well No. 15 – 1,300 gpm**  
Cottage St. & Mortimer Ave.
- **Well No. 16 – 1,225 gpm**  
Randolph St. & Bissell St.
- **Well No. 17 – 2,185 gpm**  
Slauson Ave. & Miles Ave.
- **Well No. 18 – 1,800 gpm**  
Public Works Yard  
(Bissell St. & Saturn Ave.)

Since the 2015 UWMP, the City has not operated Well Nos. 9, 10, and 11. The City previously replaced Well No. 9 with Well No. 18 at the same location in 1993. The City is not currently operating Well No. 15 and 17, due to water quality concerns and pending equipment improvements. Well No. 15 and 17 cannot currently operate even in standby or backup function. Well



No. 15 has a GAC plant under construction. Well No. 17 is inactive due to Nitrates and requires a treatment or blending.

### 3.4.2 Groundwater Production

The City's wells are equipped with flowmeters to measure groundwater production. Water production is recorded monthly by City water staff and reported annually to DWR. **Table 3.3** below displays the City's groundwater production from 2016 to 2020.

**Table 3.3**  
**Groundwater-Production**

Year	Production (AF)
2020	2,827
2019	2,888
2018	3,365
2017	4,137
2016	3,097
<b>Average</b>	<b>3,263</b>
<b>2011-2015 Avg. (2015 UWMP)</b>	<b>3,360</b>

As noted in the table above, groundwater production decreased slightly since the 2015 UWMP. Comparing the groundwater production for 2017 above to **Table 3.1**, it is apparent that the City compensated for a lower imported volume with additional groundwater production.

### 3.5 PROJECTED WATER SUPPLY

The City expects to reduce their dependency on imported water through groundwater production from its wells, particularly when Well No. 15 comes back online after improvements are complete by 2022-2023. **Table 3.4** below displays the City's projected supply availability outlook. In the near future, the City's overall water supply reliability is expected to increase due to increase in water use efficiency. That is, by maintaining its wells in good condition and maintaining access to imported water, these supplies should be able to meet demands for all climate scenarios through 2045. This is discussed in greater detail in **Section 7** of this UWMP.

**Table 3.4**  
**Projected Water Supply Availability**

Year	Imported (AF)	Ground (AF)	Total (AF)
2025	1,247	3,853	<b>5,100</b>
2030	1,247	3,853	<b>5,100</b>
2035	1,247	3,853	<b>5,100</b>
2040	1,247	3,853	<b>5,100</b>
2045	1,247	3,853	<b>5,100</b>

In addition to the supplies listed above, the City has leased unused groundwater rights from adjacent agencies in the past, only as necessary. These leases, if utilized, would



be available to the City through the City of South Gate or other agencies adjacent to the City.

### 3.6 ALTERNATE WATER SOURCES

This section provides an overview of alternative water sources (non-potable supplemental supplies) and their potential uses. Alternative water sources include recycled water and greywater. **Section 4** provides an overview of recycled water.

#### 3.6.1 Greywater

Greywater systems have been used in California to provide a source of water supply for subsurface irrigation and also as a means to reduce overall water use. Greywater consists of water discharged from sinks, bathtubs, dishwashers, and washing machines. Greywater systems consist of an underground tank and pumping system. Greywater is currently legal for subsurface irrigation in the State of California; however, strict regulations and high installation costs have impeded installation of professional greywater systems and have the unintended consequence of undocumented and noncompliant use of greywater.

The promotion of greywater systems as a means to reduce the City's overall water use is not recommended since the use of

greywater is currently limited to subsurface irrigation and therefore the overall service area-wide reduction in water use (in AF) would be minimal at best. With the recent passage of SB 1258, however, greywater use is expected to be expanded to include use for toilet flushing, and may have its place as a potential water supply. The City does not currently have a formal program in place to support greywater use.

### 3.7 TRANSFERS OR EXCHANGES

#### 3.7.1 Short Term

The City owns rights to extract 3,853 AF of groundwater annually. As a result, the City has the opportunity during periods of inactivity of groundwater production to lease some or all of its groundwater rights to other agencies to offset some of the financial burdens of purchasing imported water. Likewise, the City may be able to lease additional groundwater rights from other agencies. The City has in fact entered into lease agreements for groundwater supplies in recent years and plans to do so in the future.

Regarding imported supplies, the City has emergency interconnections with several agencies. These interconnections are capable of transferring water to the City for emergencies or short-term needs (i.e. shutdown of a well).



### 3.7.2 Long Term

Over the long term, the City expects to reduce dependency on imported water while increasing water use efficiency. Groundwater is expected provide the majority of the City's water supplies while imported water will be purchased to meet the gap between total demand and groundwater production. Since the City's population is not expected to increase significantly, the City does not foresee a need to lease or purchase groundwater rights as a long-term practice.

## 3.8 PLANNED SUPPLY PROJECTS

The City continually reviews practices that will provide its customers with adequate and reliable supplies. Trained staff continues to ensure the water quality is safe and the water supply will meet present and future needs in an environmentally and economically responsible manner. The City consistently coordinates its long-term water shortage planning with Central Basin and WRD. The City also meets with the Central Basin Water Rights Panel, which is comprised of other local water purveyors within Central Basin, to discuss local water supply and water rights issues amongst other rights holders within the Central Basin.

As noted in **Section 2** and **Section 6**, the City's projected water demands within its service area should remain relatively constant over the next 25 years. This is due to minimal population growth combined with water use efficiency measures and the continued use of recycled water. The City will only need to maintain existing supply capacity through 2045. Therefore, new water supply projects will be focused on maintaining, replacing, or upgrading insufficient wells rather than expanding supply capacity. To maintain reliability of the current supply capacity and enhance the operations of the City's facilities, the City will continue to plan for the replacement of water meters, fire hydrants, valves, and pipelines.

## 3.9 ENERGY INTENSITY OF SUPPLY

According to the City's groundwater production figures shown in **Table 3.3** on Page 3-16, the City utilized about 22% of its well capacity in the past five (5) years. That is, about 2,000 gpm of use out of 9,210 gpm total pumping capacity. This means that the each well motor runs for an average of 5.5 hours each day. With total (combined) horsepower of about 500 HP for all wells, the City uses about 380 kilowatts every hour, or about 2,100 kilowatt hours (kWh) per day, and about 770,000 kWh each year. The SCE emergency cost is about \$0.20 per kWh (total energy cost). Thus, the typical



costs to operate the City's groundwater system are as shown in **Table 3.5** below:

**Table 3.5**  
**Annual Energy Costs to Run All Well Motors**

Kilowatt-Hours (kWh)	Cost (\$) per kWh	Total Cost (\$)
770,000	\$0.20	\$154,000

The costs shown in **Table 3.5** above only include energy costs to run the motors of the wells. The costs do not include smaller miscellaneous costs such as treatment, lighting, control valves, instrumentation, and security at well sites. However, since the motor is the most significant component of the total energy costs, the

costs shown in **Table 3.5** provide a rough idea of what is required to operate the City's groundwater wells each year.

According to the most-recent Central Basin rates for its member agencies, the City is billed at a rate of about \$1,300 per AF of imported water. The City has used an average of 900 AFY in the past five (5) years. Thus, the City has purchased nearly \$1.2 million in imported water annually over the past five years. This cost data indicates that it is much more economically feasible to produce groundwater than to purchase imported water. Thus, the City plans to continue to using groundwater and surface water.



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# Section 4

## Recycled Water Opportunities

*The Los Angeles County Sanitation District (LACSD) provides wastewater treatment for many central basin cities at the Joint Water Pollution Control Plant (JWPCP) in the City of Carson (pictured below).*





## RECYCLED WATER OPPORTUNITIES

*Recycled water use has increased overall water supply reliability for Central Basin member agencies.*

### 4.1 OVERVIEW

"Recycled" or "reclaimed" water is defined as wastewater purified through primary, secondary, tertiary, or advanced treatment. Recycled water is acceptable for most non-potable water purposes such as irrigation and commercial/industrial processes. The Southern California region, from Ventura County southward, discharges nearly 2 billion gallons of treated wastewater either to the ocean or to permitted areas each day. This is considered a reliable and drought-proof water source that reduces the region's reliance on imported water. Recycled water will continue to be a critical part of the California water picture because of the area's high likelihood of drought. As

technological advancements continue to reduce treatment costs and as legislation expands the use of recycled water, more reuse opportunities should develop.

This Section describes the existing and future recycled water opportunities available to the City. The section also includes estimates of potential recycled water supply and recycled water demand through 2045 in five-year increments.

### 4.2 WASTEWATER COLLECTION SYSTEM

The City coordinates with the Los Angeles County Sanitation District (LACSD) to provide wastewater services within its service area. LACSD consists of 24 special

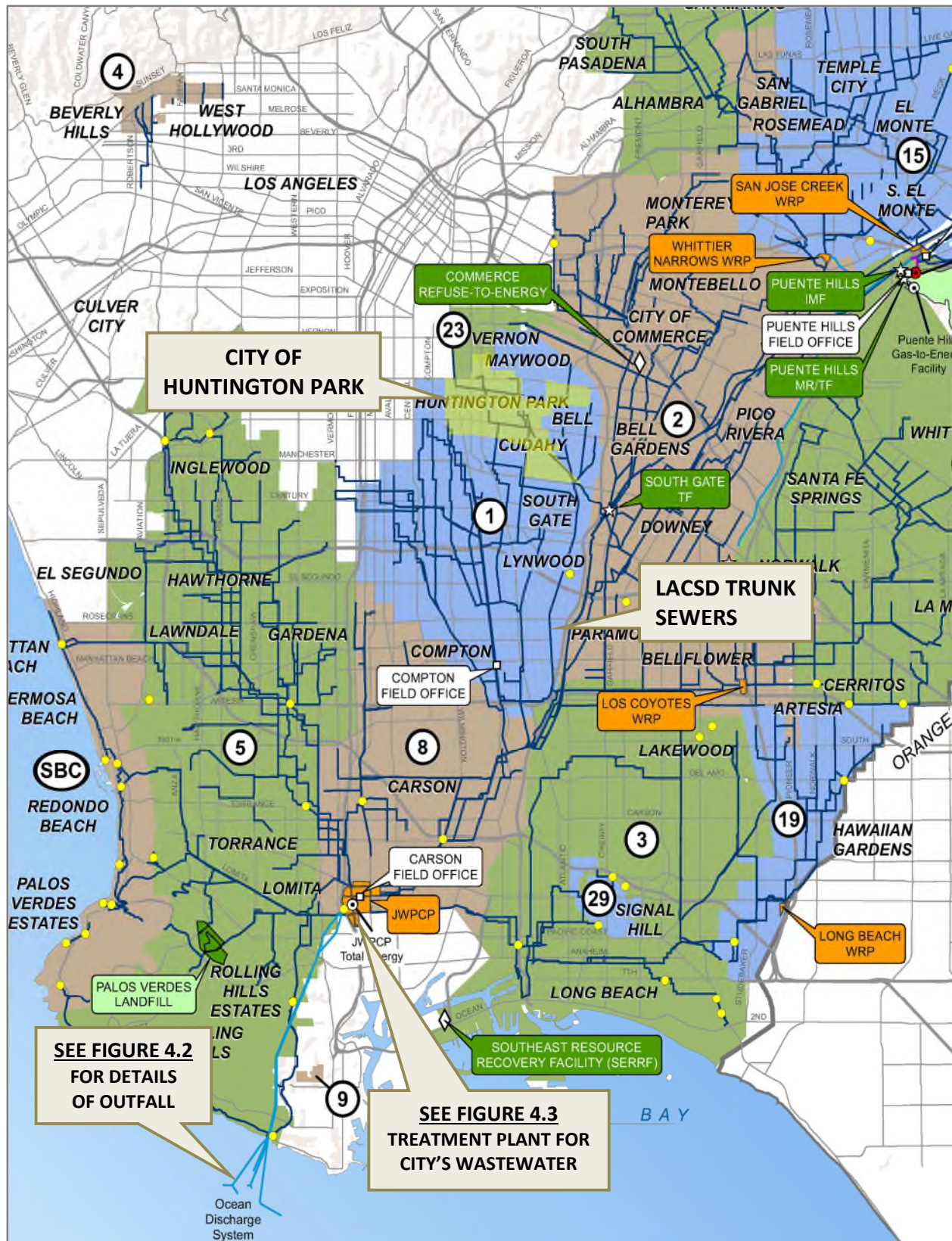


Figure 4.1: LACSD Wastewater Trunk Sewer Network



Figure 4.2: Wastewater Outfalls from JWPC



districts serving an area of 850 square miles, including 78 cities and unincorporated areas in the county. Municipal wastewater in the City is generated from a combination of residential, commercial, and institutional sewer discharges. The City does not have a large number of industrial properties that distribute high amounts of industrial wastes, such as brine.

The sewage from the City is collected from roughly 316,000 feet (60 miles) of local sewer mains that range in size from 6 inches to 18 inches. The wastewater is then discharged into larger LACSD sewer trunk

*The City's wastewater is discharged to the JWPCP in Carson, located about 2 miles away from the City.*

mains that proceed southerly (see **Figure 4.1** on the previous page). The trunk sewers travel about fourteen (14) miles from the City to the Joint Water Pollution Control Plant (JWPCP)

in the City of Carson. The JWPCP is operated by the Los Angeles County Sanitation District (LACSD). The JWPCP provides service to about 3.5 million people with the region, with a maximum design peak flow of 540 MGD, and an average flow of 280 MGD. Treated wastewater from the JWPCP is discharged through two (2) outfalls into the Pacific Ocean located about two (2) miles offshore from White Point on the Palos Verdes Peninsula. The depth of

the discharge point is approximately 200 feet below sea level. The JWPCP system includes advanced primary treatment with 60 percent secondary treatment. Because all wastewater treated at the JWPCP is currently discharged to the ocean, none of the City's wastewater is treated to recycled water standards.

#### 4.2.1 Wastewater Flows

The quantities of wastewater generated are proportional to the population and the water used in the City's service area. Estimates of the wastewater flows in the City's service area are included in **Table 4.1**. The wastewater flows were calculated assuming wastewater flow is equivalent to about 75 percent of the water demand, which is in accordance with typical municipal wastewater master plans.

**Table 4.1**  
**Wastewater Flows Collected in City**

Year	Wastewater (AF)	Wastewater (MG)
2020	3,119	1,016
2019	3,060	997
2018	3,068	1,000
2017	3,201	1,043
2016	3,133	1,021
<b>Avg:</b>	<b>3,116</b>	<b>1,015</b>

Since development and population growth are not expected to drastically change over this UWMP planning period (2045), the City

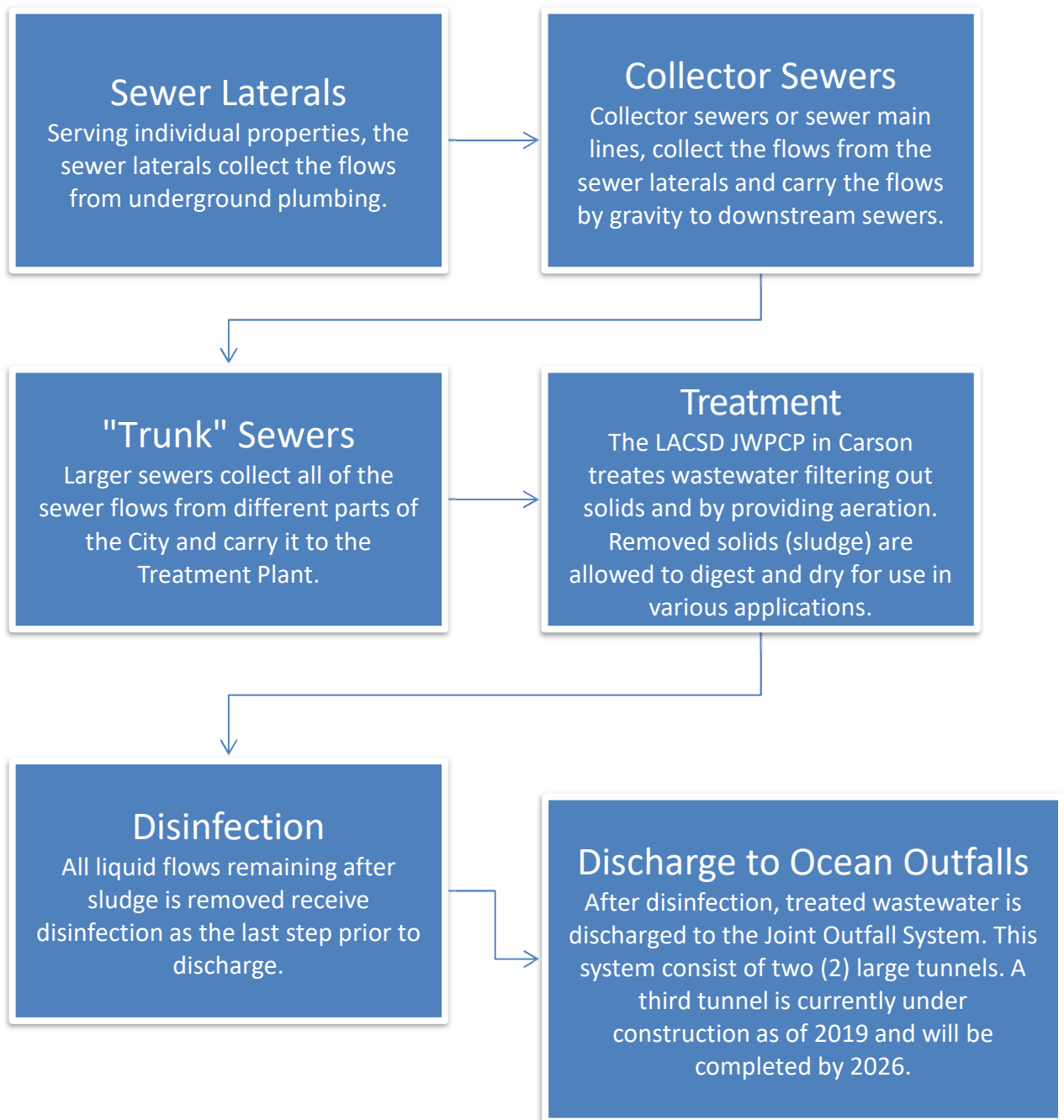


Figure 4.3: Schematic of City of Huntington Park Wastewater Collection System

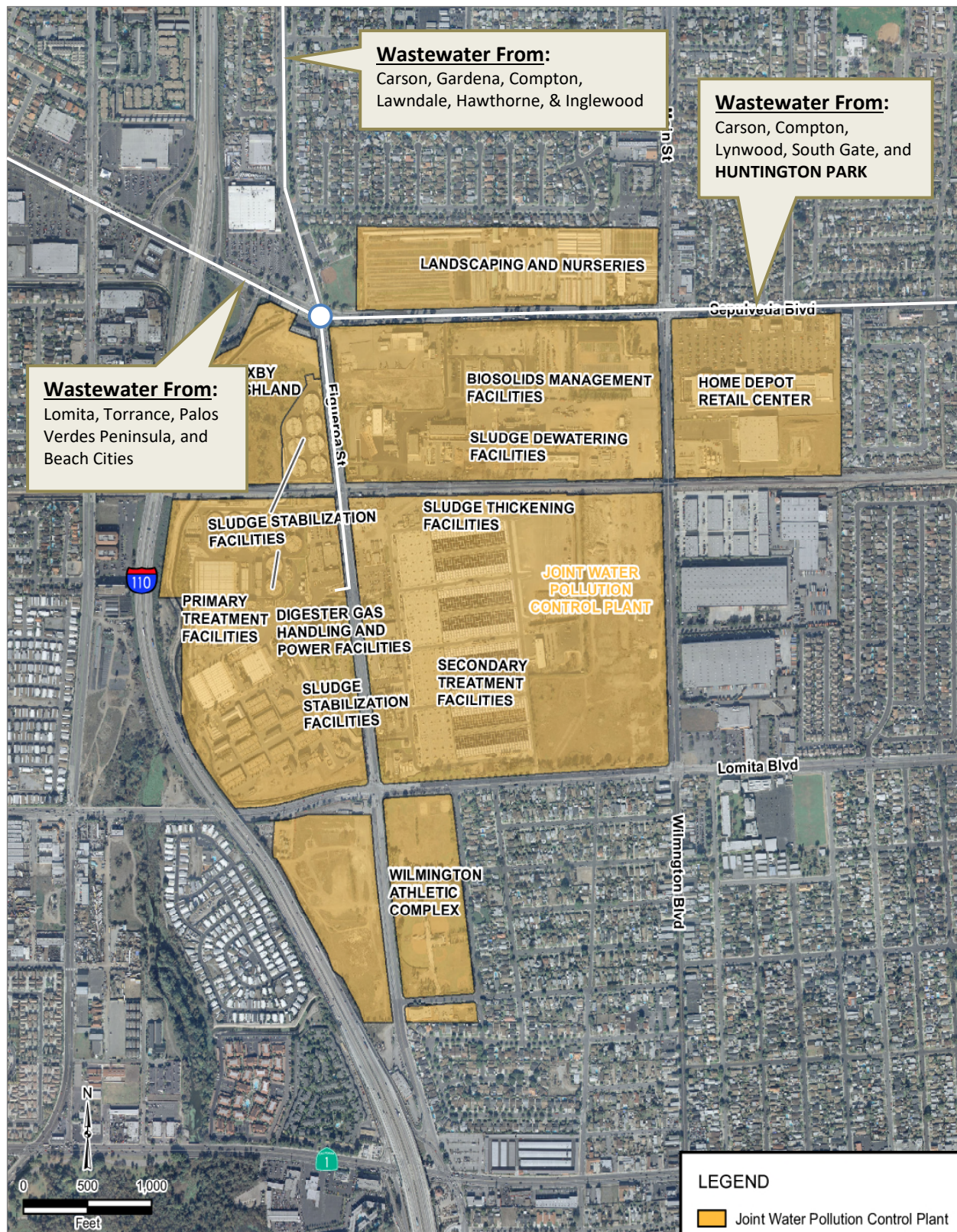


Figure 4.4: JWPCP in the City of Carson



anticipates that future wastewater flows can be estimated using the projected demands shown in **Section 6** multiplied by a return rate of 75 percent (0.75). **Table 4.2** below shows the projected wastewater flows:

**Table 4.2**  
**Projected Wastewater Flows Collected in City**

Year	Flows (AF)	Flows (MG)
2025	3,292	1,073
2030	3,258	1,062
2035	3,222	1,050
2040	3,184	1,038
2045	3,145	1,025
<b>Avg:</b>	<b>3,220</b>	<b>1,049</b>

As indicated by **Table 4.2**, wastewater flows will only be slightly greater in 2045 than in 2020, in spite of a projected 5% growth in population as indicated in **Section 2**. This is due to increases in water use efficiency as described in **Section 6**.

### 4.3 RECYCLED WATER

As mentioned in the previous section, the City does not own or maintain any sewer collection or treatment facilities. The JWPCP is the only wastewater treatment facility for the City. The JWPCP currently provides only secondary treatment, and the treated wastewater does not meet Title 22 Standards. However, as a member of Central Basin, the City uses recycled water

produced from the Los Coyotes Water Reclamation Plant in the City of Cerritos and the San Jose Creek Water Reclamation Plant in the City of Whittier. Based on the location of Central Basin's recycled water pipelines (see **Figure 4.5**), only the Los Coyotes Plant provides the City with recycled water.

The Los Coyotes WRP has a wastewater treatment capacity of 37.5 million gallons per day (MGD) and produces approximately 21.20 MGD of recycled water. The recycled water provides irrigation for schools, golf courses, parks, nurseries and greenbelts as well as industrial use at companies for carpet dying and concrete mixing throughout the region. The recycled water produced at the

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*The Los Coyotes Wastewater Treatment Plant is the sole source of recycled water for the City.*

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Los Coyotes Plant undergoes tertiary treatment and denitrification. Tertiary treatment provides additional treatment to secondary effluent with coagulation, filtration and disinfection. Tertiary treated water can be used for a wide variety of industrial and irrigation purposes where non-potable water can be used.

Central Basin's recycled water system (also known as the Ibbetson Century Recycled Water Project) serves recycled water to the City's service area through one (1) branch



extension from the recycled water transmission line in Randolph Street. The recycled water is provided to the City from a recycled water pump station located at the intersection of Otis Street and Elizabeth Avenue.

The City meters the recycled water flow in their system. The City's recycled water distribution system provides irrigation to the Salt Lake Municipal Park. The City has been using recycled water since 1992.

**Table 4.3** indicates the recent recycled water purchases from Central Basin:

**Table 4.3**  
**Recycled Water Use in City**

Year	Recycled Water Produced or Used (AF)
2020	44
2019	37
2018	197
2017	282
2016	49
<b>Average:</b>	<b>122</b>

As indicated by **Table 4.3** above, recycled water fluctuated significantly from 2016 to 2017. This was due in part to landscaping changes that were made at the Salt Lake Park. The amount of recycled water used by the City over the last five years has exceeded the projections for recycled water use in the 2015 UWMP.

#### 4.3.1 Projected Recycled Water Use

There are no current plans by the City to use additional amounts of recycled water at Salt Lake Park. In addition, due to lack of existing piping infrastructure and financing, the City is not planning on expanding the use of recycled water to other customers in the City's water service area. For these reasons, the City projects to use the following amounts of recycled water through 2045:

**Table 4.4**  
**Projected Recycled Water Use**

Year	Recycled Water Production/Use (AF)	Recycled Water Production/Use (MG)
2025	52	17
2030	52	17
2035	52	17
2040	52	17
2045	52	17

As indicated by **Table 4.4** above, the amount of recycled water used at the park would be about 300,000 gallons per week. The expansion of recycled water use beyond this amount would be possible if the funding for recycled water pipeline infrastructure was covered by Central Basin and/or private developers, and an agreement was in place for the use of recycled water, the City would then be able to expand the use of recycled water.

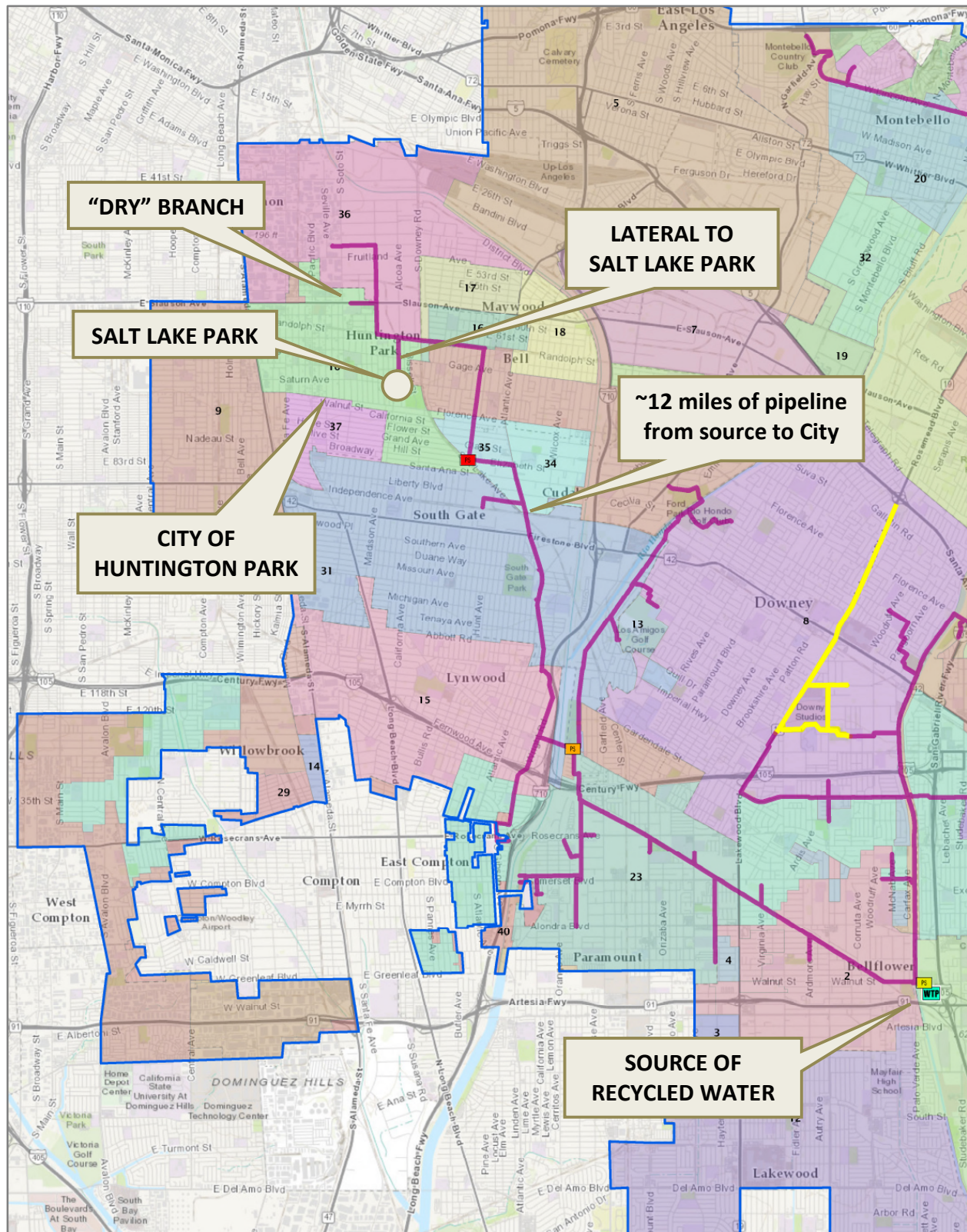


Figure 4.5: Wastewater Outfalls from JWPC



### 4.3.2 Planned Recycled Water Infrastructure

Currently, there is existing recycled water infrastructure owned and maintained by Central Basin within the City. There are also planned recycled water improvements that are projected to be constructed within a few miles of the City. The projected facilities include planned Central Basin facilities and planned facilities that will be jointly owned and maintained by MWD and LACSD via a partnership agreement.

#### ***Gateway Cities Recycled Water Expansion***

The Central Basin planned improvements are collectively known as “*Gateway Cities Recycled Water Expansion*”, and will consist of three (3) key pipeline extensions within the vicinity of the City. These pipeline extensions include:

- 20-inch Diameter Pipeline in the City of South Gate
- 12-inch Diameter Pipeline in the City of Lynwood
- 16-inch Diameter Pipeline in the City of Bell Gardens

These projects have received environmental clearance in 2018 and are “shovel ready” as of this 2029 UWMP. These three (3) projects are shown in **Figure 4.6**. These pipeline expansions will provide recycled

water to businesses, parks, and schools. Amongst these proposed pipelines, the closest pipeline extension to the City is located on Ardmore Avenue and California Avenue, which is about a half-mile from the City. However, this extension will not be able to serve the City, since there are no potential recycled water users within the vicinity of this pipeline extension. Further, this extension is considered a “branch” extension that will only serve recycled water customers in the City of South Gate. If the City were to utilize recycled water from this planned expansion project, the City would have to connect to the 20-inch transmission line along Southern Avenue. For these reasons, this planned project will not likely result in additional recycled water use by the City.

#### ***MWD/LACSD Regional Facility***

The Regional Recycled Water Program, a partnership with MWD and LACSD, plans to produce recycled water from the JWPCP. The program will start with a demonstration facility and could eventually become one of the largest advanced water treatment plants in the world. The facility would take wastewater treated at the JWPCP (water that is currently sent to the ocean outfalls) and purify it using reverse osmosis and other processes. The recycled water could be sent to local groundwater basins, allowing for additional natural filtration

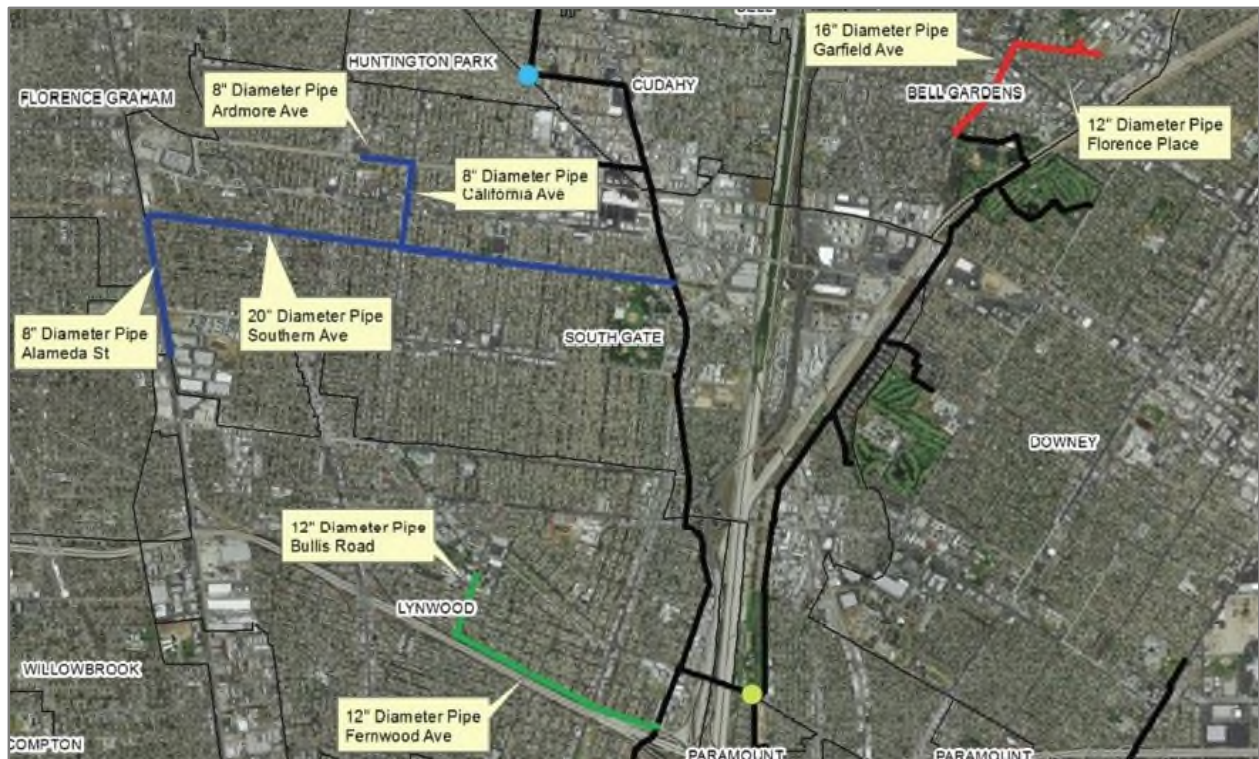


Figure 4.6: Gateway Cities - Planned Recycled Water Expansion

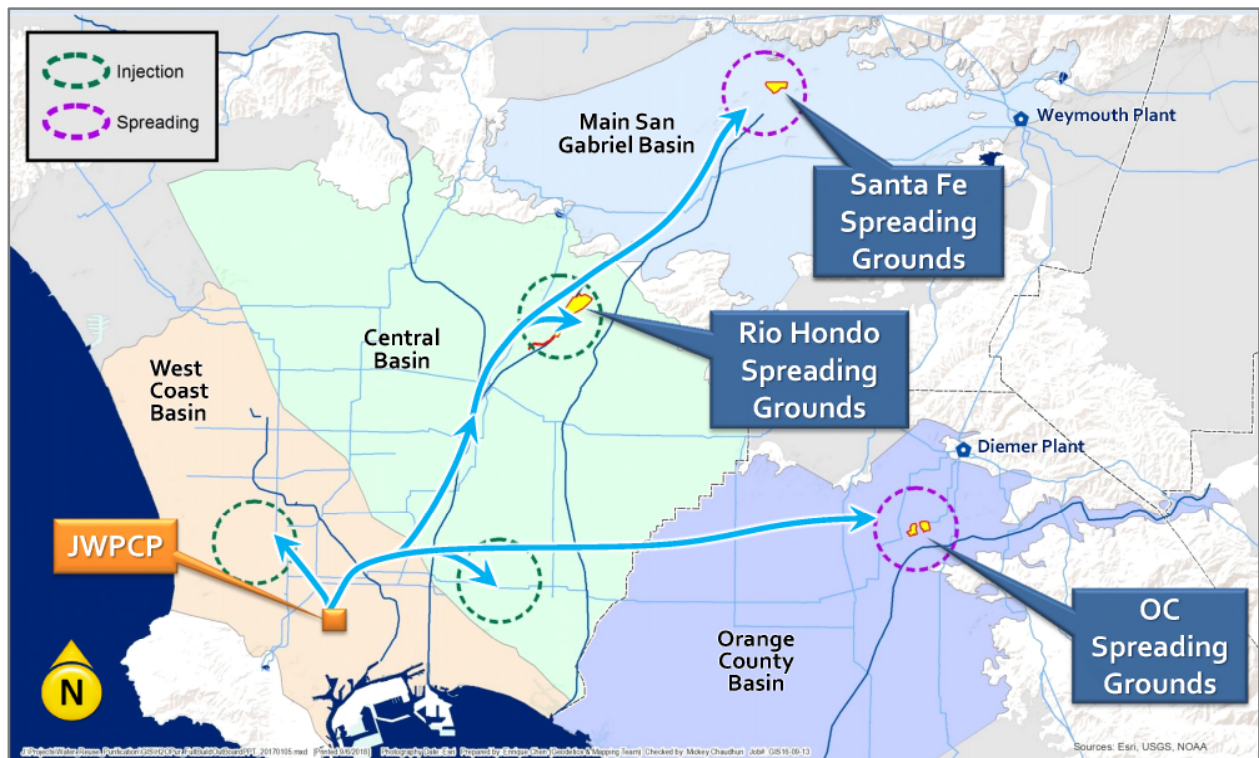


Figure 4.7: MWD/LACSD Planned Regional Facility



and storage. The full-scale program, as envisioned, would produce and distribute up to 150 million gallons of purified water per day to groundwater basins, enough to serve 335,000 homes.

Feasibility studies completed in late-2016 estimate the full program would cost approximately \$2.7 billion to build. Based on those estimates, water produced by the program would cost about \$1,600 an acre-foot, which is comparable to other new local supplies.

As of 2019, MWD and LACSD completed a demonstration facility, which produces up to 0.5 MGD of recycled water per day. The demonstration facility will be operated for at least one year to generate information needed for the potential construction of a full-scale recycled water plant.

Due to the proximity of the proposed injection sites to the City, this result in indirect recycled water opportunities for the City. The aquifers underlying the City would receive additional replenishment which could give the City potential “storage” rights in addition to the City’s adjudicated pumping rights.

#### 4.3.3 Potential Recycled Water Use

A recycled water master plan has not been prepared for the City to date, and the City has not made a formal identification of

potential recycled water users. However, typical potential recycled water users include the following:

- Landscape Users (parks, sports fields)
- Commercial/Manufacturing Users
- Energy/Power Production

The City has large landscape municipal customers such as parks and schools. Theoretically, there would be existing customers available to purchase recycled water if and/or when recycled water infrastructure is in place. More specifically, the City will be able to identify existing or future potential recycled water users through the following means:

- Existing water consumption records *(determine high volume users of water)*
- Existing commercial website data *(to determine potential use of recycled water)*

Finally, the City can look into activating the existing branch extension on Slauson Avenue. Currently, this branch extension is “dry” in the sense that the valve for this branch is closed and there is no water in this pipeline. This pipeline could be extended down Slauson Avenue to Miles Avenue and Gage Avenue. This would then allow the City to serve recycled water to Huntington Park High School, City Hall, and Gage Middle School.



## 4.4 ALTERNATIVE “RECYCLED” WATER

### 4.4.1 Santa Monica Example

The City of Santa Monica completed its Santa Monica Urban Runoff Recycling Facility (SMURRF) in 2002. The primary objectives of the facility were to eliminate contamination of the Santa Monica Bay caused by urban runoff, increase water conservation awareness, and to provide cost-effective treatment for producing high-quality water for reuse in landscape irrigation and indoor plumbing.



Figure 4.8: Water Treatment at SMURRF Facility

The facility treats urban runoff. The treated water is then pumped through a City-wide distribution system that serves parks, medians, Woodlawn Cemetery, and dual-plumbed buildings. The facility has helped the City in increasing land use densities while decreasing its need for additional potable supplies.

### 4.4.2 Potential Use of Recycled Stormwater

The Huntington Park city boundaries, unlike the City of Santa Monica, do not extend to the ocean. Thus, there are no environmental motives for the City to recycle stormwater. The construction and maintenance costs associated with a stormwater recycling plant would prohibit the City from considering such a facility as a means to provide an alternative water supply.

## 4.5 ENCOURAGING AND OPTIMIZING RECYCLED WATER USE

The City does not have a recycled water optimization plan as there is only one site that uses recycled water. Analyses have indicated that present worth costs to expand the recycled water distribution system within the City are not cost effective at the current time (i.e. relative to the cost of potable water). Nevertheless, the City will continue to conduct feasibility studies for recycled water use in the City, including identification of potential recycled water users.

The City can encourage recycled water use by restructuring its water rates and service charges for customers who use recycled water; however, recycled water use will be limited to those customers who are within close proximity to a recycled water pipeline.



Once the City has the capacity to provide recycle water to a specific area, then they would consider incentives to encourage and optimize recycled water use. The exact incentive method would be developed as the expansion of the existing recycled water

infrastructure progresses. This may include (1) monitoring, enforcement and training for recycled water use, and (2) delivery of recycled water at a reduced rate or a rate less than that of potable water for an initial period of time.

# Section 5

## Water Quality

*The City of Huntington Park treats groundwater produced from Well Nos. 15 and 17 with a Granular Activated Carbon (GAC) system (pictured below).*





## WATER QUALITY

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*Treatment of groundwater helps ensure high quality drinking water for the City.*

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## 5.1 OVERVIEW

The quality of a natural body of water varies over time. During periods of intense rainfall or snowmelt, tributaries for surface water can change, resulting in new constituents or diluting existing constituents in the receiving waters. Conversely, during times of drought, contaminants may increase in concentration without additional flows available to dilute the concentration of contaminant levels. As groundwater levels rise and fall, groundwater will pass through different layers of rock and sediment and will receive different constituents from those strata. Likewise, groundwater wells that have not been utilized over periods of

time can see water quality issues resulting from stagnant water. In summary, the quality of water changes over the course of a time and location, and these variables must be recognized by water agencies. For these reasons, City of Huntington Park monitors its wells for water quality as required by State and Federal regulations.

This Section provides a general description of the City's water sources, water quality monitoring and reporting, and water treatment. Groundwater, local surface water, and imported (recharge) water are discussed in this Section. A discussion of potential water quality impacts on the reliability of supplies is also provided.



## 5.2 WATER QUALITY STANDARDS

### 5.2.1 Federal Regulations

In 1974, Congress passed the Safe Drinking Water Act (SDWA) in order to protect public health by regulating the nation's municipal drinking water supply. As part of the SDWA, powers were given to the Environmental Protection Agency (EPA) to regulate

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*As part of Federal EPA standards, water agencies are required to prepare annual water quality reports.*

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drinking water. The 1996 amendment to the SDWA required monitoring of new types of contaminants. Since the 1996 amendment to the SDWA, the EPA has identified over 90 contaminants in its National Primary Drinking Water Regulations (NPDWR) or “primary standards”). The main categories that the EPA has identified include: biological microorganisms, disinfectants, disinfection byproducts, inorganic chemicals, organic chemicals, and radionuclides. As required by the SDWA, water agencies must provide annual Water Quality Reports to its customers.

### 5.2.2 State Regulations

Water quality regulations have changed since the Safe Drinking Water Act in 1974. Several state, regional and county agencies

have jurisdiction and responsibility for monitoring water quality. The actual regulations on water quality have also changed over the years. This is the result of the discovery of new contaminants, changing understanding of the health effects of previously known as well as new contaminants, development of new analytical technology, and the introduction of new treatment technology. All water purveyors are subject to drinking water standards set by the Federal Environmental Protection Agency (EPA) and the State Water Resources

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*In 2014, the State’s drinking water program was transferred from the Health Department to the State Water Resources Control Board.*

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Control Board (SWRCB). The California Department of Public Health (CDPH) previously oversaw the water quality of the State's drinking water program and the environmental lab accreditation program. As of July 2014, those programs were transferred to the SWRCB. Under the SWRCB, the Division of Drinking Water (DDW) regulates public drinking water systems, including setting the maximum contaminant levels (MCLs) and regulating the operation of water systems. In addition to the SWRCB, several regional and county agencies have jurisdiction and responsibility for monitoring water quality and contaminant sites.



### 5.2.3 State Drinking Water Standards

The State of California has established two (2) main types of drinking water standards:

1. Maximum Contaminant Level (MCL)
2. Public Health Goal (PHG)

MCLs are the regulations aimed to be health protective drinking water standards to be met by public water systems. The levels set by the State take into account a contaminant's health risk, detectability, treatability, and costs of treatment. MCLs are further broken down into the following two (2) types:

1. Primary MCL – Health Related
2. Secondary MCL – Taste & Odor

Secondary MCLs are not federally enforceable according to the most recent SDWA amendments. However, they are regulated by the State of California. DDW publishes a list of Secondary MCLs, which include Copper, Iron, and Zinc.

PHGs are established by the Office of Environmental Health Hazard Assessment (OEHHA). They are concentrations of drinking water contaminants that pose no significant health risk if consumed for a lifetime. Public water systems use PHGs to provide information about drinking water contaminants in their annual water quality

reports. Certain public water systems must provide a report to their customers about health risks from a contaminant that exceeds its PHG and about the cost of treatment to meet the PHG, and hold a public hearing on the report.

### 5.2.4 City Standards

To ensure quality of its water, the City conducts sampling and testing of water on a weekly, monthly, and quarterly basis. Testing is performed at several locations of the City's distribution system, as well as at the source (City wells). Results of the water quality testing are posted annually to the City's website. The City's water quality reports since 2004 (a total of 15 reports), are archived at the following link:

<http://hpca.gov/605/Consumer-Confidence-Report>

The testing is conducted on several parameters, including organic & inorganic chemicals, bacteriological contaminants, pesticides & herbicides, and radiological contaminants. The City contracts with certified laboratories to perform water quality testing. The City's Annual Water Quality Reports (also known as "Consumer Confidence Reports") are filed with DDW and released to customers. The annual reports identify regulated substances (Primary MCLs), secondary substances



(Secondary MCLs), unregulated substances (PHGs), and other constituents of interest (such as calcium and magnesium). The City identifies all detected substances the annual reports. In addition, every three (3)

*In addition to regular testing, the City tests for lead and copper every three (3) years at the tap.*

years, at least 30 residences are tested for lead and copper at-the-tap. According to the City's 2019 Annual Report, the most recent results for this type of testing (performed in 2019) indicate that lead was not detected above the MCL in any of the thirty (30) homes tested. Likewise, copper was not detected above the MCL in any of the thirty (30) homes tested.

### 5.3 QUALITY OF SOURCES

The two sources of water supply for the City, as mentioned in **Section 3**, are imported water from the Central Basin Municipal Water District (Central Basin) and groundwater from the Central Groundwater Basin. The quality of water delivered to the City's customers is related to the quality of these sources.

#### 5.3.1 Imported Water Quality

Central Basin is a wholesale agency that provides water received from the Metropolitan Water District (MWD) to its

24 member agencies. Central Basin's service area is located in the portion of MWD's service area that is a "central pool", in the sense that the area is served by three (3) MWD water treatment plants as follows:

- Jensen Plant in Granada Hills
- Weymouth Plant in La Verne
- Diemer Plant in Yorba Linda.

These plants serve localized areas as well as a portion of a common area or "central pool", which includes nearly all of Central Basin's service area.

MWD imports water from Sacramento and San Joaquin Rivers through the State Water Project and the Colorado River via the Colorado River Aqueduct. These two sources have different water quality issues. Based on a previous source water assessment prepared by MWD, Colorado River water is considered to be most vulnerable to recreation, urban and storm water runoff, increasing urbanization in the watershed, and wastewater. In general, water obtained from the Colorado River tends to have high salinity and also has been known to contain harmful metallic elements. The State Water Project is considered to be most vulnerable to urban and storm water runoff, wildlife, agriculture, recreation, and wastewater. The SWP tends to have high biological loads due to farming activities in the San Joaquin

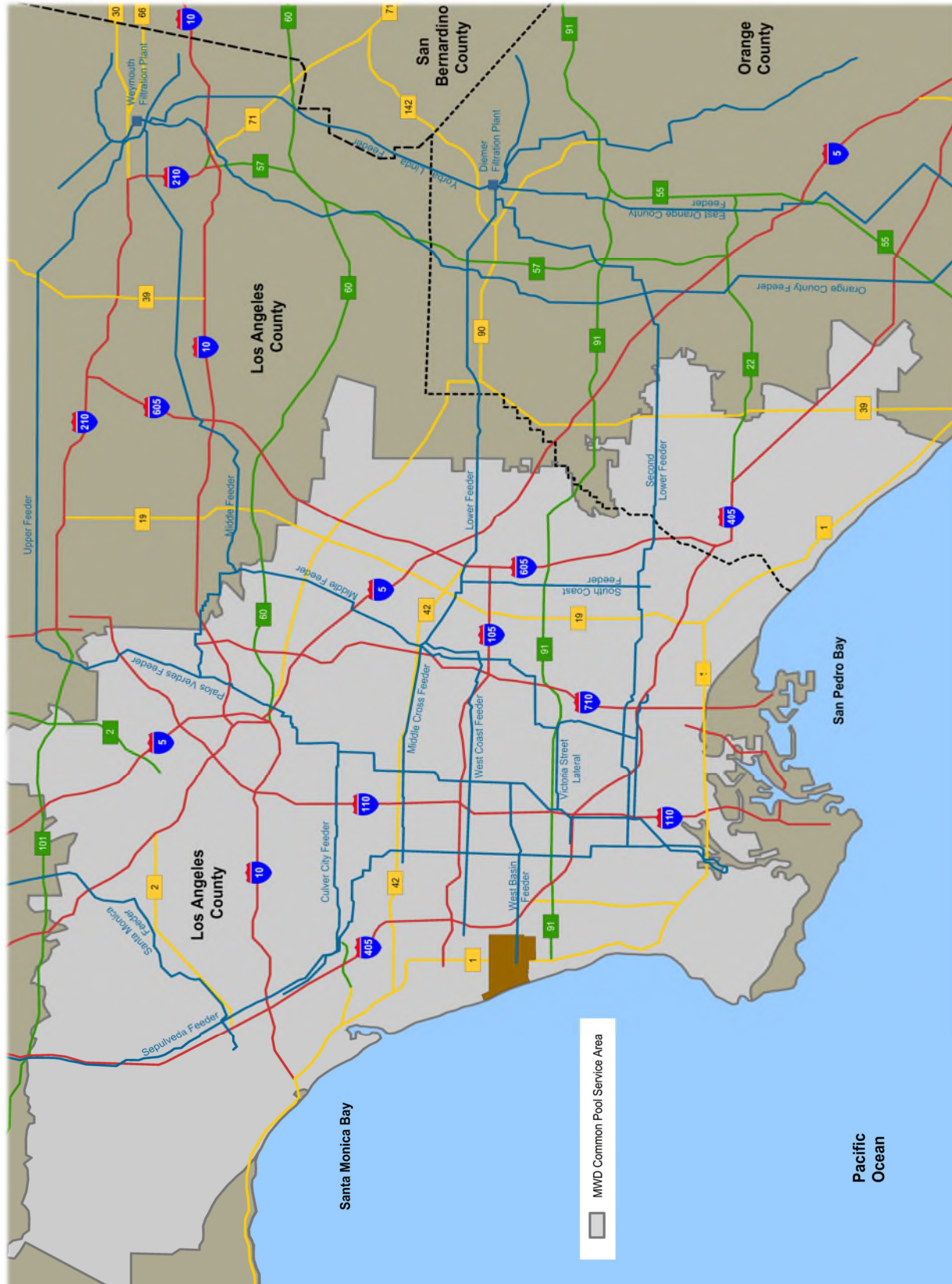


Figure 5.1: MWD's "Central Pool" Receives a Blend of Water from Three (3) Treatment Plants



Valley. Water containing high biological loads tends to have higher treatment costs than water with low biological loads.

In summary, the major regional water quality concerns include the following:

- Salinity
- Perchlorate
- Total organic carbon and bromide
- Nutrients (algal productivity)
- Arsenic
- Uranium
- Chromium-6
- 1,2,3-trichloropropane
- Constituents of Emerging Concern

The City's latest annual report (2019) has listed, but not detected, most of the above contaminants in its water. MWD has taken several actions and adopted programs to address these contaminants and to ensure a safe and reliable water supply.

### ***Colorado River Salinity***

Water imported from the Colorado River via the CRA has the highest level of salinity of all of MWD's sources of supply, averaging around 630 milligrams per liter (mg/L). The salts in the Colorado River system are indigenous and pervasive, mostly resulting from saline sediments in the Basin that were deposited in prehistoric marine environments. They are easily eroded, dissolved, and transported into the river

system. To offset these salinity levels, CRA water must be blended (mixed) with lower-salinity water from the SWP to meet MWD's flow-weighted TDS standard of 500 mg/L for blended imported water.



**Figure 5.2: Colorado River & Sedimentary Rock**

Concern over salinity levels in the Colorado River has existed for many years. To foster interstate cooperation on this issue, the seven basin states formed the Colorado River Basin Salinity Control Forum (Forum). In 1975, the Forum proposed, the states adopted, and the EPA approved water quality standards, including numeric criteria and a plan for controlling salinity increases. The standards require that the plan ensure that the flow-weighted average annual salinity remain at or below the 1972 levels, while the Basin states continue to develop their apportioned water supply. The Forum selected three stations on the main stream of the lower Colorado River as appropriate points to measure the river's salinity. These stations and numeric criteria are (1) below Hoover Dam, 723 mg/L; (2) below Parker Dam, 747 milligrams per liter (mg/L); and

(3) at Imperial Dam, 879 mg/L. The numeric criteria are flow-weighted average annual salinity values. According to recent reports from the US Bureau of Reclamation, average annual flows tested for salinity at Imperial Dam were reported to have concentrations of about 700 mg/L, a 372 mg/L increase over the natural salinity. TDS in Lake Havasu was measured at 662 mg/L in October 2015 and was 592 mg/L in October 2019. Under the recent drought conditions (2020), Lake Powell has received higher salinity water, and as the system normalizes, salinity is expected to increase in the lower Colorado River as water from Lake Powell is released downstream.

According to 2019 estimates by MWD, concentrations of salts in the Colorado River cause approximately \$450 million in quantified damages in the lower Colorado River Basin each year. However, the salinity control program has proven to be very successful and cost-effective. Salinity control projects remove over a million tons of salts from the Colorado River water annually, resulting in reduced salinity concentrations of over 100 mg/L as a long-term average.

### ***Uranium in Colorado River***

Uranium can infiltrate a water source either directly or indirectly through groundwater seepage. Due to past uranium mill activities near the Colorado River, a previous 16-

million-ton pile of uranium mill tailings was located that has the potential for contamination. Rail shipment and disposal of the uranium mill tailings pile from the Moab site began in April 2009 using American Recovery and Reinvestment Act 2009 funding which helped to accelerate initial cleanup efforts.



**Figure 5.3: Uranium Tailings Near Colorado River**

Through September 2020, the Department of Energy (DOE) has shipped over 10.9 million tons of mill tailings to the Crescent Junction disposal cell. DOE estimates completing movement of the tailings pile by 2034, depending on annual appropriations. Although uranium levels measured at MWD's intake are below State MCL levels, MWD has only limited ability to remove uranium through traditional treatment, and thus mitigation methods are crucial to avoiding uranium contamination. In 2020, the DOE released a strategy to revive and expand nuclear fuel production which would be of interest to MWD if projects are in proximity to the Colorado River.



### ***Total Organic Carbon and Bromide in SWP***

Due to the natural habitat of the Bay-Delta region water in the SWP contains higher levels of Total Organic Carbon (TOC) and Bromide. Water containing high levels of TOC and Bromide, once treated with disinfectants such as chlorine or ozone, can lead to the production of Disinfection by-products (DBPs). DBPs are known to cause certain cancers and pose a concern to the City's imported water supply. MWD manages DBP levels by participating in the CALFED Bay-Delta Program to safeguard

*MWD has reduced the concentration of DBPs by using ozone as the primary treatment for SWP water.*

SWP source water and also by providing advanced treatment operations. Further, MWD has made improvements to its treatment plants to utilize ozone more than as its primary disinfectant. To maintain the byproducts at a level consistent with federal law, MWD limited the percentage of water from the SWP for plants utilizing chlorine as the primary disinfectant. As of 2017, MWD completed ozone upgrades at Skinner, Diemer, and Weymouth water treatment plants, respectively. The estimated ozone retrofit cost for all five treatment plants is over \$1.1 billion. The SWP has also experienced lower alkalinity concentrations during years with increased snowmelt, particularly in 2017 and 2019.

### ***Nutrients (Algal Productivity) in SWP***

Elevated nutrient levels in the SWP can adversely affect the City's imported water quality by stimulating biomass growth such as algae and aquatic weeds. Nutrients can also provide a source of food leading to the growth of nuisance biological species. This can lead to taste and odor concerns and can impede normal treatment operations.



**Figure 5.4: Algal Growth in State Water Project**

MWD reservoirs receiving SWP water have experienced several taste and odor episodes in recent years. For example, between 2015 and June 2020, MWD reservoirs experienced 13 taste and odor events requiring treatment. A taste and odor event can cause a reservoir to be bypassed and potentially have a short-term effect on the availability of that supply. MWD has a comprehensive program to monitor and manage algae in its source water reservoirs. This program was developed to provide an early warning of algae related problems and taste and odor



Figure 5.5: MWD's Diemer Treatment Plant in Yorba Linda, CA

events to best manage water quality in the system. Further, MWD offsets the nutrient rich SWP water by blending it with CRA water in MWD's blend reservoirs. Although nutrient loading is a concern, MWD does not anticipate any effects on its supplies from the SWP.

### ***Arsenic (Colorado River and SWP)***

Arsenic is a naturally occurring element found in rocks, soil, water, and air. It is used in wood preservatives, alloying agents, certain agricultural applications, semi-conductors, paints, dyes, and soaps. Arsenic can get into water from the natural erosion of rocks, dissolution of ores and minerals, runoff from agricultural fields, and

discharges from industrial processes. Long-term exposure to elevated levels of arsenic in drinking water has been linked to certain cancers, skin pigmentation changes, and hyperkeratosis (skin thickening).

In April 2004, OEHHA set a public health goal for arsenic of 0.004 µg/L. The MCL for arsenic in domestic water supplies was lowered to 10 µg/L on January 2006 in the federal regulations and on November 2008 in the California regulations. The standard impacts both groundwater and surface water supplies. Historically, MWD's water supplies have had low levels of this contaminant and would not require treatment changes or capital investment to comply with this new standard.



The DLR for arsenic is 2 µg/L. Between 2010 and June 2020, arsenic levels in MWD's water treatment plant effluents ranged from non-detect (< 2 µg/L) to 3.3 µg/L. For MWD's source waters, levels in Colorado River water have ranged from 2.2 to 2.8 µg/L, while levels in SWP water have ranged from non-detect (< 2 µg/L) to 4.8 µg/L.

### ***Other Imported Water Constituents***

Through advances in technology and research over time, new contaminants are discovered and existing contaminants are more readily detected. Some of the current contaminants not previously mentioned that pose a threat to the City's imported water supplies include, but are not limited to: Chromium VI, N-nitrosodimethylamine (NDMA), and Pharmaceuticals & Personal Care Products (PPCPs). Continued mitigation efforts by MWD should lead to a decrease in the threat level of these contaminants, even if the City may experience water quality concerns in the short term over the course of this UWMP planning period.

### **5.3.2 Groundwater Quality**

In general, groundwater in the main producing aquifers of the Central and West Coast basins is of good quality with average TDS concentrations around 500 mg/L. Localized areas of marginal to poor water

quality exist primarily on the basin margins and in the shallower and deeper aquifers impacted by seawater intrusion.

As part of the Basin's groundwater quality monitoring, WRD and the USGS began a cooperative study in 1995 to improve the understanding of the geohydrology and geochemistry of Central and West Coast Basins. Out of this effort came WRD's geographic information system (GIS) and the Regional Groundwater Monitoring Program.

As of the current year (2021), WRD maintains a total of 335 monitoring wells at 60 locations throughout the Central and West Coast Basins. These wells allow water quality and groundwater levels to be evaluated on an aquifer-specific basis. Regional Groundwater Monitoring Reports are published by WRD for each water year. The most recent Groundwater Monitoring Report for the Central and West Coast Basin was published by WRD in March 2021.

### ***Groundwater Monitoring***

Historically, WRD performed groundwater sampling of its monitoring wells on a semi-annual basis, and has compiled an enormous database of analytical results over the past few decades. In 2018, WRD conducted an intensive review of this database specifically to determine if the



frequency of sampling could be reduced at some wells without compromising its current assessment of groundwater conditions in the Central or West Coast Basins. WRD was able to identify 11 monitoring wells where the sampling frequency could be reduced from semi-annual to annual.

From 2017 to 2020, WRD collected groundwater samples collected from 112 of WRD's monitoring wells. The samples were submitted to a State certified laboratory for analysis for select constituents of interest. Over two-hundred (200) production wells were also tested. The eleven (11) major regional water quality concerns include the following:

1. Total Dissolved Solids (TDS)
2. Iron
3. Manganese
4. Chloride
5. Nitrate
6. Trichloroethylene (TCE)
7. Tetrachloroethylene (PCE)
8. Arsenic
9. Perchlorate
10. Hexavalent Chromium
11. 1,4 Dioxane

Out of the eleven (11) constituents listed above, eight (8) were detected above the MCL in the 112 monitoring wells. Likewise, eight (8) constituents were detected above the MCL in the roughly 200 production

wells. **Table 5.1** below lists the constituents that were detected above the MCL:

**Table 5.1**  
**2019-2020 Testing Results**  
**Central Basin Production Wells**

Constituent	Wells Exceeding MCL (No./ No. Tested)
Total Dissolved Solids (TDS)	0/211
Iron	17/217
Manganese	42/216
Chloride	0/211
Nitrate	1/221
Trichloroethylene (TCE)	20/224
Tetrachloroethylene (PCE)	12/224
Arsenic	9/215
Perchlorate	6/219
Hexavalent Chromium	0/210
1,4 Dioxane	54/78

According to the City's 2019 Annual Water Quality Report, the City did not detect any of the above constituents exceeding the MCL or SMCL. However, this is due in part to the City's advanced treatment and blending operations with imported water from Central Basin.

### ***Groundwater Monitoring***

Per the 2015 UWMP, the operations of the previous Omega Chemical Corporation have affected a good portion of the Central Basin. Drums of waste solvents and other



chemicals from various industrial activities processed at this facility were leaked into the basin, which have resulted in concentrations of PCE and TCE, which currently affect some of the City's wells. However, the City has installed wellhead treatment such as granular activated carbon (GAC) at the impacted wells.

## 5.4 IMPACTS OF WATER QUALITY

The quality of water dictates management strategies the City will implement, including, but not limited to, the selection of water sources, treatment alternatives, blending options, and modifications to existing treatment facilities. A direct result from the degradation of a water source, including groundwater, is increased treatment cost before consumption. The poorer the quality of the source water, the greater the treatment cost. This in turn can decrease water supply reliability by potentially decreasing the total supply.

### 5.4.1 Impacts of Abandoned Wells

The presence of abandoned groundwater wells represents a potential hazard to the quality of the groundwater basin. Abandoned and improperly destroyed wells can act as conduits for contaminants to reach drinking water supplies. It is vital for the long-term protection of the basin that abandoned wells be located and destroyed.

While it is the owner's responsibility to destroy an abandoned well, local water agencies should be proactive about making sure that abandoned wells are in fact destroyed. The destruction of abandoned groundwater wells should be performed in accordance with state standards. California Water Code Section 13750.5 requires that those responsible for the destruction of water wells possess a C-57 Water Well Contractor's License. Whenever a water well is destroyed, a report of completion must be filed with the California DWR within 60 days of the completion of the work. SWRCB/DDW is responsible for permitting and inspecting construction and destruction of wells.

The City policy is for all functional and abandoned wells, a "well site control zone," the area immediately surrounding the well alternatively referred to as the "wellhead," needs to be established. The purpose of this zone is to provide protection from vandalism, tampering, or other threats at the well site. The size of this zone can be determined by using a simple radius, or an equivalent area. The well site control zone should be managed to reduce the possibility of surface flows reaching the wellhead and traveling down the unprotected casing. SWRCB-DDW

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*Abandoned wells can pose a water quality concern if left unaddressed.*

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regulations recommend a minimum radius of 50 feet for well site control zones for all public water systems in the state. The Program applies to the abandoned wells as well as functional activities that could potentially lead to “source water contamination” according to EPA regulations.

#### 5.4.2 Groundwater Contamination Response

Currently, the City has a Hazard Mitigation Plan (HMP), and maintains a framework for the management of the City during an emergency. The City also has a Water Shortage Contingency Plan (WSCP) in place to deal with the effects of a potential groundwater contamination that reduces overall water supplies. This information is provided in **Section 8**.

#### 5.4.3 DDW Sanitary Surveys

A Watershed Sanitary Survey is a document that examines the potential sources of contaminants in the watersheds and includes recommendations for managing these effects. Per DDW guidelines, the Watershed Sanitary Surveys are supposed to be updated every five years. In the City’s case, the City does not use any surface water, so the City does not prepare Watershed Sanitary Surveys. However, the City is still subject to periodic inspections by DDW staff every three years. The Sanitary

Surveys conducted by DDWR include inspection and evaluation of the following:

1. Water Sources
2. Treatment
3. Distribution System
4. Finished Water Storage
5. Pumping Facilities
6. Monitoring & Reporting
7. System Management/Operation
8. Operator Compliance

The City’s previous Sanitary Survey Inspection occurred in December, 2019. The next inspection by DDW staff will take place around December, 2022.

#### 5.4.4 Impacts on Management & Reliability

As a result of the City’s imported water connection with Central Basin, the City has redundancy in its water supplies. The City has been able to meet water demands since Well No. 15 and Well No. 17 have been offline (as mentioned in **Section 2**). Once the wells are brought back online, additional groundwater will be available to supplement the City’s water supply. With modest population growth and increased water use efficiency, the City expects to total water demands to decrease over this UWMP planning period (see **Section 7**). Therefore, the City does not anticipate water quality to impact water supply over the course of this UWMP planning period.



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# Section 6

## Water Use

*The residential sector accounts for over two-thirds of total water use in the City. The commercial sector accounts for about 25 percent of the total water use in the City.*





## WATER USE



*Splash pads at the City's parks provide a relief from hot summer weather.*

## 6.1 OVERVIEW

As a fully developed City, water consumption is not subject to significant change from year to year. However, water use within the City's service area is variable each month based on climate conditions. This section explores the water usage trends in the City and quantifies total usage per customer type. In addition, the provisions of the Water Conservation Act of 2009 (Senate Bill 7x7) are explored in detail.

## 6.2 RECENT STATEWIDE WATER-USE CHANGES

As a result of the Coronavirus Disease 2019 (COVID-19) Pandemic, Commercial and Institutional water use has declined. On

March 19, 2020, an Executive Order and Public Health Order directed all Californians to stay home, except to go to an essential job or to shop for essential needs. It was then modified on May 4, 2020. The Regional Stay Home Order, announced December 3, 2020, triggered additional restrictions after a region was announced to have less than 15% ICU availability. It prohibited private gatherings of any size, closed sector operations except for critical infrastructure and retail, and required 100% masking (with certain exceptions as indicated in guidance for use of face coverings) and physical distancing. The Regional Stay Home Order was lifted January 25, 2021. During his 2021 State of the State Address Governor Gavin Newsom



reported that California has administered nearly eleven (11) million doses of the vaccine, and that the State was well on its way to seeing an end to this pandemic.

The State Water Resources Control Board – Division of Drinking Water (DDW) has stated that the public water systems (PWS) operations are designated as essential functions and staff and suppliers are not restricted by any current orders. This has allowed for water system operators and maintenance workers to successfully keep the PWS providing safe and clean drinking water to their customers.

The full extent of impacts of the coronavirus pandemic on the water sector are still emerging, but one area that has come to the fore is the effect on municipal water demand. Available data indicate that residential water demand has increased

*The Covid-19 Pandemic has impacted water use in the residential and commercial sectors.*

while non-residential demand has decreased.

In San Francisco, California, residential demand increased by ten (10) percent, while non-residential demand declined by 32 percent. Residential

communities have experienced either modest increases or the smallest decreases. Utilities where total water use has declined during the coronavirus pandemic will see a drop in revenue.

Moreover, as businesses reopen and implement hygiene and disinfection practices and as temperatures rise, water use may rise dramatically. Such rapid and dramatic changes in water use can exacerbate existing and reveal new system weaknesses.

## 6.3 CITY WATER NEEDS

### 6.3.1 Past City Water Needs

At the time of incorporation, the City of Huntington Park was a streetcar suburb of the Los Angeles railway for industrial workers. When the City was incorporated in 1906, the City's population was under 2,000 persons. The population grew steadily until the early 1990s, when the City reached "built-out" conditions. Although the population has grown by 0.20 percent annually since 1990 (about 6 percent total), the City's population has decreased slightly since 2015.

As mentioned, the City has been in "built-out" conditions since the early 1990s. For this reason, development is expected to consist only of minor infill re-development in the coming decades. Future water demand increases will be attributable to these minor redevelopments as well as increases in household densities in existing developments. Due to this slowed growth, the City's water use over the past 10 years has been fairly consistent, with less than 5



percent fluctuation in annual water use. Recent total water consumption reported for calendar year 2020 is slightly less than total water consumption reported for 2010.

### 6.3.2 Current Water Needs

The City supports the water needs of its residents and businesses while maintaining the beauty of its community parks, schools, and recreational facilities both in the private and in the public sector. Since the City is zoned mainly for residential use, there are personal-use water needs (i.e. showers, toilets, and clothes washers) and non-personal water-use needs (i.e., irrigation, car washing, etc.). The City has a significant number of residential lots which require consistent irrigation to maintain landscapes. However, the volume of non-person water use needs is amongst the lowest of comparable cities in the Los Angeles region.

In the commercial and institutional sector, water needs vary as customers range from restaurants to offices and from retail stores to schools. Office buildings and retail stores require significantly less water than restaurants and schools and are not usually the key focus of water conservation efforts. The key focus for the City in the commercial sector will be to maintain a consistent water supply to businesses along Pacific Boulevard. Since this street is a key source of sales revenue for the City.

To maintain civic pride and a sense of community, City parks and other City right of ways (medians, etc.) require consistent irrigation. To prevent water waste, the City follows an irrigation schedule that limits the length of irrigation to avoid overspray runoff and also evapotranspiration from daytime watering.



Figure 6.1: Salt Lake Park

Overall, water needs within the City's service area are significantly lower than most Southern California agencies. Nevertheless, the City has passed conservation ordinances similar to other agencies which limits or restricts non-personal water use during periods of drought. This ensure that water is conserved for the more important health and safety needs of its customers. The City's Conservation Ordinance is discussed in greater detail in **Section 8**.

## 6.4 CLIMATE IMPACTS ON WATER USE

California faces changes in water use habits due to a variety of issues including population growth, regulatory restrictions



and climate change (including the recent severe drought of 2011-2016). More specifically, weather unpredictability (more extreme drought and flood events) poses additional challenges to water agencies, not only due to impacts on water supplies but also due to impacts on water demands.

During and since the preparation of the 2015 UWMP, there have been local and statewide influences on water use in the City. In January of 2014, Governor Brown declared a state of emergency and directed state officials to take all necessary actions to prepare for water shortages. As the drought prolonged into 2015, to help cope with the drought, Governor Brown gave an executive order in April 2015 which mandated a statewide 25% reduction in water use, with each agency assigned specific target reductions.



**Figure 6.2: Executive Order B-29-15 (2015)**

Changes in water usage habits have a special concern for the State due to the inter-dependence of many agencies for the

transfer and use of water. For instance, some agencies are unable to produce water locally and thus entirely dependent on imported water sources, while others are able to produce all water locally (groundwater).

Further, some agencies are able to reduce water demands with only minimal impacts (i.e. water sales revenues), while other agencies will incur more significant impacts if water

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*Due to varying impacts on agencies, the next plan to reduce water demands should be tailored to reduce adverse financial impacts on agencies.*

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consumption is reduced. This would include agricultural and heavy industrial users. Thus, the State will likely face challenges in the near future to find the correct balance of water supply allocations to meet demands under various weather conditions.

#### 6.4.1 California Water Plan Update 2018

DWR's California Water Plan Update 2018 is a resource guide for local agencies on water management planning. It sets goals for developing new water resources and maximizing existing water resources. It also provides information on funding available to local agencies in meeting sustainability goals. Since the Water Plans are updated every five (5) years during non-UWMP years, the information contained in these plans is helpful for water agencies in water resource planning in the UWMPs.



## 6.5 WATER USE

### 6.5.1 Past Water Use

Although the population of the City has increased by about 5% over the past two decades, overall water use within the City's service area has declined steadily. This is a result of water conservation, as water use efficiency has outweighed the additional water users. **Table 6.1** below presents past water consumption from 2001 to 2015:

**Table 6.1**  
**City Past Water Use**

Year	Total Consumption (AF)
2015	4,474
2014	4,873
2013	4,774
2012	4,797
2011	4,855
2010	4,843
2009	5,067
2008	5,242
2007	5,395
2006	5,441
2005	5,490
2004	5,800
2003	5,776
2002	5,987
2001	5,948
<b>Average:</b>	<b>5,251</b>

As the table suggests, water use began to trend downward since 2002. This correlates to the water use efficiency that is described

in this Section. Based on the numbers in **Table 6.1**, water use had decreased by nearly 25% since the peak water consumption in 2002.

### 6.5.2 Recent Water Use

**Table 6.2** below shows the City's water consumption over the past five (5) years. Water consumption since 2015 has been consistent, with a fluctuation of only 5% each year.

**Table 6.2**  
**City Recent Water Use**

Year	Total Potable Consumption (AF)	Per Capita (GPCD)
2020	4,357	69
2019	4,462	70
2018	4,132	65
2017	4,210	66
2016	4,330	68
<b>Average:</b>		<b>68</b>
<b>2020 Water Use Target:</b>		<b>109</b>
<b>Central Basin Regional Target</b>		<b>111</b>

As indicated by **Table 6.2** above, the City has already reached their 2020 water use reduction target. Further, as indicated by the Central Basin Regional Target, the City's water use is more efficient than the Central Basin agencies.



## 6.6 WATER USE BY SECTOR

### 6.6.1 Service Connections/Accounts

The City maintains records of water consumption and bills its customers on a bi-monthly basis for its water service. The City maintains approximately 6,600 water service accounts with a mixture of residential, commercial, institutional, and industrial customers. The City maintains single-family and multi-family accounts as separate sectors. Commercial and institutional accounts are the other two accounts metered in the City's billing system. As of 2020, the current breakdown of accounts is shown in **Table 6.3**:

**Table 6.3**  
**Number of Service Connections (2020)**

Sector	Service Accounts
Single Family Residential	1,700
Multi-Family Residential	4,100
Commercial	800
Institutional (School)	50
<b>Total Connections:</b>	<b>6,650</b>

Nearly 90 percent of the total service connections are residential (single or multi-family), since the City consists primarily of residential properties. Commercial and institutional accounts comprise the remaining 10 percent of the total accounts.

In addition to the accounts listed above, the City's 2015 UWMP identified Industrial, Landscape, and Agricultural accounts. These accounts are not listed explicitly in the City's billing system, but are estimated in **Section 6.6.2** on the following page.

In general, the total number of active accounts does not necessarily represent the total number of actual service connections tapped into the City's distribution mains. The total number of active accounts varies on a monthly basis based on occupancy of a dwelling unit or commercial property.

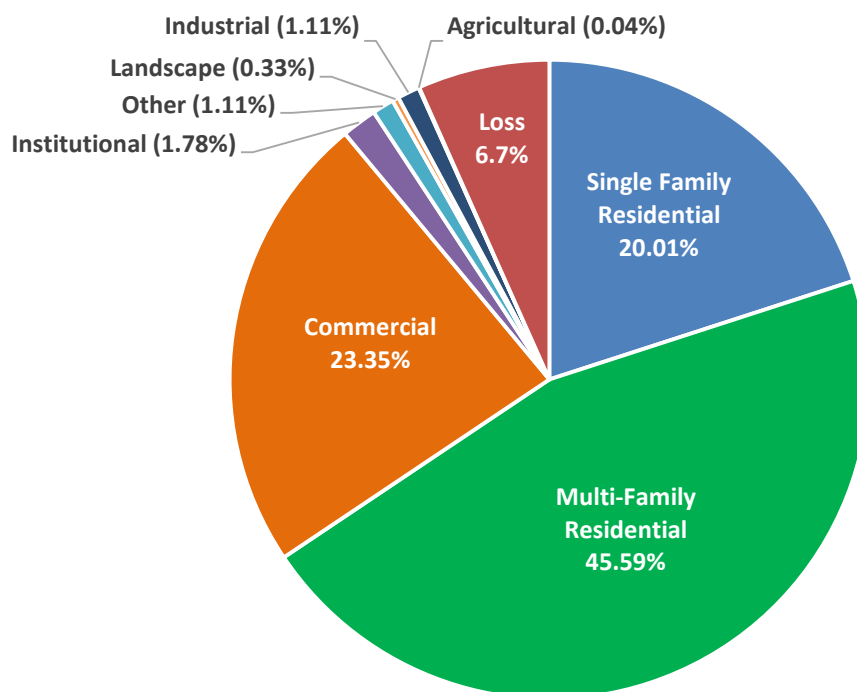
### 6.6.2 Water Use

The City records water use per sector and bills customers based on a tiered water rate structure. Water sales data is recorded by City water staff monthly, billed bi-monthly, and submitted to DWR annually. The total water consumption by customer type since 2015 is shown on **Table 6.4** on the following page. As noted by the table, Multi-Family Residential accounts are the highest consuming sector in the City, since most of the City consists of multi-family accounts. The number of multi-family residential accounts has increased significantly since the 2015 UWMP. This is a result of the City modifying their billing system to classify certain properties that were previously considered single-family accounts as multi-family accounts. This has also resulted in fewer single-family accounts.



**Table 6.4**  
**Recent Water Use by Sector**

Sector	2016	2017	2018	2019	2020
<b>Metered Water Sales</b>					
Single Family Residential	828	847	896	839	881
Multi-Family Residential	1,963	2,014	1,994	2,267	2,135
Commercial	1,254	1,108	992	1,004	979
Institutional/Governmental	73	83	92	69	76
<b>Total Metered Sales</b>	<b>4,118</b>	<b>4,052</b>	<b>3,974</b>	<b>4,179</b>	<b>4,071</b>
<b>Estimated Use (Included as Part of Metered Use Above)</b>					
Industrial	49	48	48	47	47
Landscape Irrigation	15	14	14	14	14
Other	49	48	48	47	47
Agricultural	2	2	2	2	2
<b>Total Estimated Use</b>	<b>115</b>	<b>112</b>	<b>112</b>	<b>110</b>	<b>110</b>
<b>Losses</b>					
Unaccounted for Water	212	158	158	283	286
<b>Total Water Consumption</b> (Total Supply into System):	<b>4,330</b>	<b>4,210</b>	<b>4,132</b>	<b>4,462</b>	<b>4,357</b>



**Figure 6.3: Projected Water Demand by Sector (in 2045)**



As indicated by **Table 6.4**, the City's water "losses" (unaccounted for water) averaged 220 AF, which is about 7 percent of the total water supply into the City's distribution system. Unaccounted for water consists of routine flushing, unmetered use, and water losses. Although water losses have cost impacts on water agencies, they cannot be prevented entirely. Instead, effort is given to controlling the quantity of water losses (to a cost-effective extent) in order to reduce the cost impact of such losses on water operations. For this reason, the City has prepared water loss audits using AWWA software. The water audits for 2016 to 2019 are provided in the Appendix of this UWMP. The 2019 Audit shows that the City's Leakage Index (the ratio of real loss to unavoidable loss) was 3.0, which is an average score for water agencies.

## 6.7 WATER CONSERVATION ACT

### 6.7.1 Act Background (SBx7-7)

Due to reductions of water in the San Joaquin Delta, the Legislature drafted the Water Conservation Act of 2009 (SBx7-7) to protect statewide water sources. The legislation called for a 20 percent reduction in water use in California by the year 2020. The legislation amended the water code to call for 2020 and 2015 water use targets in the 2010 UWMPs, updates or revisions to these targets in the 2015 UWMPs and

allows the Department of Water Resources (DWR) to enforce compliance to the new water use standards. Beginning in 2016, failure to comply with interim and final targets will make the City ineligible for grants and loans from the State needed to attain water self-sufficiency by 2020. Failure to comply with interim and final targets will make the City ineligible for grants and loans from the State needed to attain water self-sufficiency by 2020.

In addition to an overall statewide 20 percent water use reduction, the objective of SBx7-7 is to reduce water use within each hydrologic region in accordance with the agricultural and urban water needs of each region. Currently, the Department of Water Resources (DWR) recognizes 10 separate hydrologic regions in California as shown in **Figure 6.4**. Each hydrologic region has been established for planning purposes and corresponds to the State's major drainage areas. The City of Huntington Park is in the South Coast Hydrologic Region (HR), which includes all of Orange County, most of San Diego and Los Angeles Counties, parts of Riverside, San Bernardino, and Ventura counties, and a small amount of Kern and Santa Barbara Counties. The South Coast HR is shown in **Figure 6.5**.

Per capita water use, measured in gallons per capita per day (GPCD), in the South Coast HR varies between different water



Figure 6.4: California's 2020 Water Conservation Goals



**Figure 6.5: South Coast Hydrologic Region**



agencies depending on the geographic and economic conditions of the agency's service area. The South Coast HR has an overall baseline per capita water use of 180 GPCD and DWR has established a regional target of 149 GPCD for the region as a compliance target to satisfy SBx7-7 legislation.

The *Methodologies* guidebook made provisions that allowed a water supplier to meet the target requirements by achieving one of four (4) different targets, provided that the water supplier's baseline water use was low enough relative to the region within which it supplies water. For most agencies, the two most common options are 1) 20% reduction or 2) 5% reduction from the Hydrologic Region.

### **Exempt Agencies**

If an agency has a baseline per capita water use of 100 GPCD or less, that agency will not have to adhere to any reduction targets as that agency is already considered water efficient. In such a case, that agency must document in subsequent UWMPs that its water usage is still under 100 GPCD.

#### **6.7.2 SBx7-7 Baseline & Target**

The basic procedure for determining the applicable water reduction target is illustrated by **Figures 6.6 and 6.7** on the following page. The City previously

established water use targets for 2015 and 2020. DWR provided guidelines for determining these targets in its *Methodologies* guidebook for the 2010 and 2015 UWMPs. In the 2010 and 2015 UWMPs, the City's baseline water use and targets were determined based on the procedures shown in **Figures 6.6 and 6.7**.

If an agency's 10-year baseline is slightly higher than the Hydrologic Region's target, that agency still must achieve a five percent reduction from its 5-year baseline. If an agency has a per capita water use of 100 GPCD or less, that agency will not have to adhere to any reduction targets as that agency is already considered water efficient.

Since the City does not use recycled water, a 10-year instead of a 15-year rolling average was previously calculated. The City's baseline water use is 126 GPCD, which was obtained from the 10-year period January 1, 1995 to December 31, 2004.

**Table 6.5** shows historic (1995 to 2009) water use and provides the base period ranges used to calculate the baseline water use for the City. The data was used to calculate the continuous 10-year and 5-year average baseline. Moreover, regardless of the compliance method adopted by the City it will need to meet the minimum water use

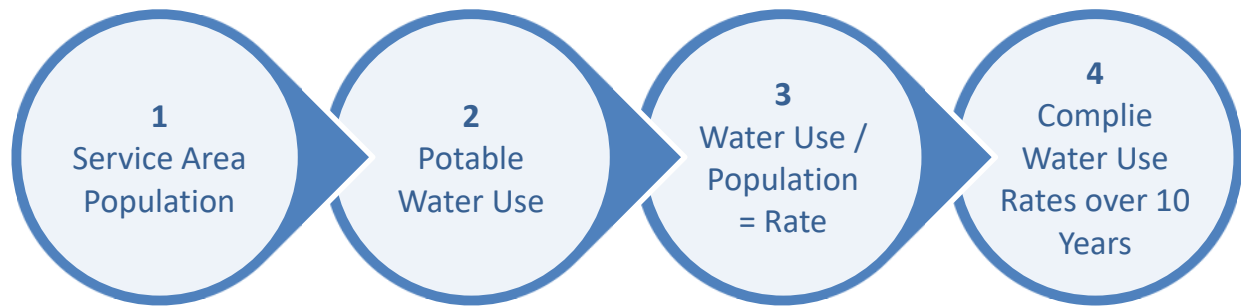


Figure 6.6: Procedure for Determining Baseline Per Capita Water Use

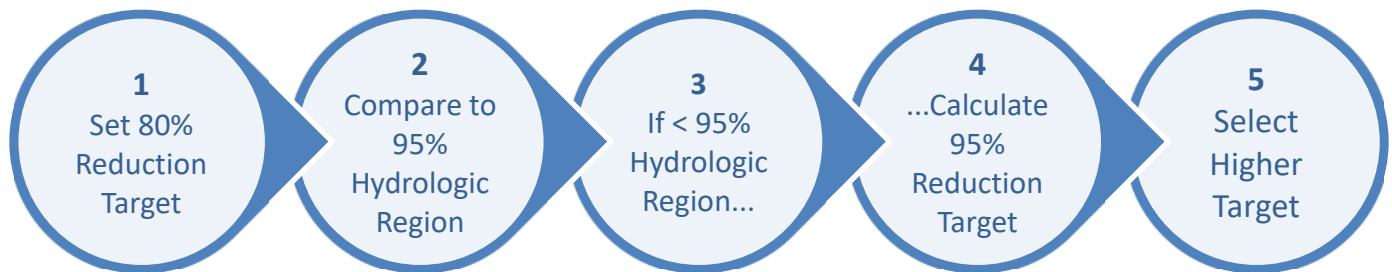


Figure 6.7: Procedure for Determining Target Per Capita Water Use



target of 5 percent reduction from a 5-year baseline as calculated.

**Table 6.5**  
**City of Huntington Park Water Use**

Year	Total Potable Consumption (AF)	Per Capita (GPCD)
2015	4,474	70
2014	4,873	77
2013	4,774	76
2012	4,797	77
2011	4,855	78
2010	4,843	67
2009	5,067	70
2008	5,242	73
2007	5,395	84
2006	5,441	84
2005	5,490	84
2004	5,800	88
2003	5,776	88
2002	5,987	91
2001	5,948	91
<b>10-yr. Baseline (2001-2010)</b> <b>(SB7: 10608.20)</b>		<b>77</b>
<b>5-yr. Baseline (2004-2008)</b> <b>(SB7: 10608.22)</b>		<b>76</b>
<b>South Coast HR:</b>		<b>180</b>

As shown in **Table 6.5** above, the City's 10-yr and 5-yr baselines were determined to be 77 GPCD and 76 GPCD, respectively.

The City's baseline water use was then compared to the regional compliance target to determine the applicable reduction amounts per the SBx7-7 additions to the water code. The legal stipulations applicable to the City and the required target to be enforced by DWR are shown in **Table 6.6** below:

**Table 6.6**  
**City of Huntington Park**  
**SBx7-7 2020 Water Use Targets**

Min. Reduction Requirement (10608.22)	20% Target (10608.20) (b)(1)	5% Reduction from Regional Target (10608.20) (b)(3)
N/A	N/A	141.5
<b>2020 Per Capita Target:</b>		<b>141.5</b>
<b>Interim (2015) Target:</b>		<b>109</b>

Since the City's baseline water use is under 100 GPCD, the City is technically exempt from the requirements of SBx7-7, per Section 10608.22 of the Water Code. However, since the City established a target in the 2015 UWMP, this 2020 UWMP hereby reaffirms the targets listed in the 2015 UWMP. That is, the City's 2020 target is hereby reaffirmed to be 141.5 GPCD (5 percent reduction from the South Coast Hydrologic Region target of 149 GPCD). This is in accordance with **Target Method 3**, per Section 10608.20(b)(3) of the Water Code.



### 6.7.3 SBx7-7 Target Compliance

It is noteworthy to mention that the City has seen a 25 percent increase in water efficiency in the past 20 years. This is due to stricter conservation measures, more of water-saving plumbing fixtures, and overall water conservation awareness. As indicated by **Table 6.2** on **Page 6-5**, the City has already achieved not only its interim (2015) target, but also its final 2020 target. The City can maintain its consumption rates below the SBx7-7 target by continuing to focus on water conservation.

### 6.7.4 Regional Central Basin Alliance Target

In addition to having its own 2020 target, Central Basin created the Gateway Regional Alliance to establish a regional baseline of water use and 2015 and 2020 conservation targets. A total of twelve (12) agencies participated in the Gateway Regional Alliance. The regional alliance targets were calculated to be as follows:

- Regional Alliance Baseline: 128 GPCD
- 2015 Interim Target: 120 GPCD
- 2020 Compliance Target: 111 GPCD

The City did not participate in the Gateway Regional Alliance and is not held to the requirements of this target. Further, the City's compliance and interim targets are lower than the regional alliance targets.

## 6.8 PROJECTED WATER DEMAND

Future water use projections must consider significant factors on water demand, such as development and/or redevelopment, and climate patterns, among other less significant factors that affect water demand. Rainfall will continue to be a major influence on demand as drought conditions will increase demand at a time when these supplies are limited. Redevelopment is expected to be an ongoing process, but it is not expected to significantly impact projected water use since the City is already in a "built-out" condition.

### 6.8.1 Passive Savings

As the City's population continues to grow mildly over time and as water conservation measures continue to be implemented, the City should experience only mild increases in its water consumption over the long term in spite of overall population increases. This is due to "passive savings". That is, over time, homes will be equipped with water-saving fixtures and landscapes. Also, over time, residents will become more aware of water conservation and City water code policies such as limitations on landscape irrigation and car washing. This "passive savings" will help offset new water demands stemming from any population growth in the City.



### 6.8.2 Low-Income Water Demands

Senate Bill 1087 and California Water Code Section 10631.1 require that water use projections of a UWMP include the projected water use for single-family and multi-family residential housing for lower income households as identified in the housing element of any city, county, or city and county in the service area of the supplier. The City has a civic and legal responsibility to provide for the water-related health and safety of the community. One of the City's objectives is to provide its customers with an adequate and reliable supply of high-quality water to meet present and future needs in an environmentally and fiscally responsible manner. As such, water use priority does not differ based on income level.

According to the Housing Element of the City's 2030 General Plan, prepared in 2020, there are about 15,000 total housing units in the. The low-income units in the City are as follows:

- **Extreme/Very-Low Income**  
About 5,500 Homes
- **Low-Income**  
About 3,750 Homes

Thus, there are a total of 9,250 low-income housing units in the City. This represents about 62 percent of the total housing needs

in the City. With an estimated 4 persons per household and a consumption rate of 70 GPCD, the City requires about 2,900 AFY of water to meet the needs of these residents.

Regarding projected low-income water needs, the population projections shown in **Section 2** of this UWMP indicate that population will increase by about 2,500 people by 2045. This means that about 1,550 additional low-income persons will require water in the City. This amounts to about 120 AFY of additional water to meet low-income housing needs. Finally, according to the 2030 Housing Element, Page 6-70, there are a total of 557 affordable housing units projected to be developed by 2030. This would add about 1,200 to 1,500 people to the City within the next decade. If constructed, the City would need about 100 to 120 AFY of additional water to meet the needs of these residents. These low-income water demands are included in future projections for single family and multi-family homes listed in **Table 6.7** on the following page.

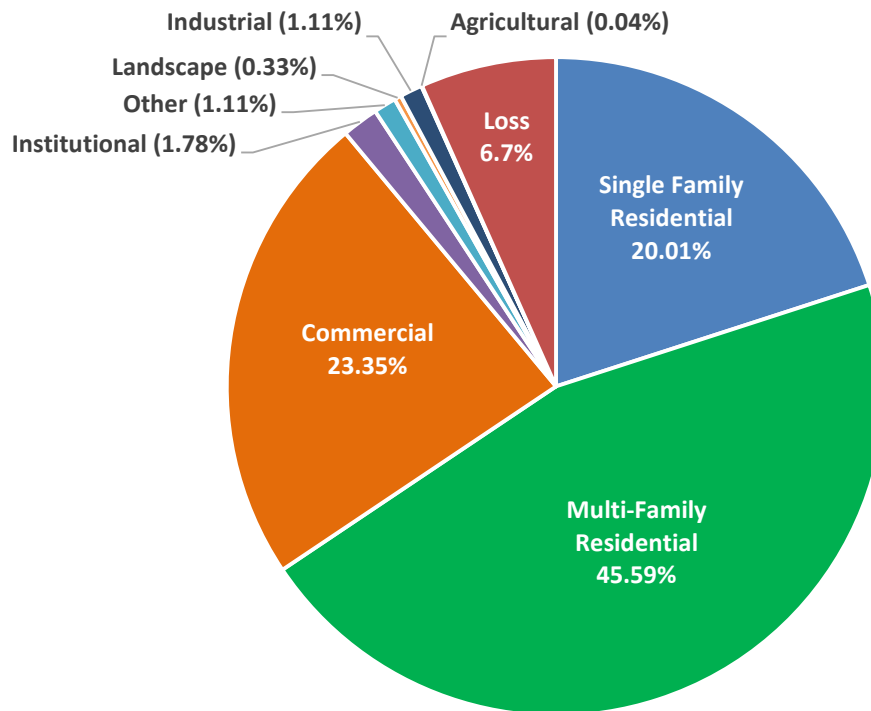
### 6.8.3 Projected Water Use by Sector

For planning purposes, the City's projected water use for 2025-2045 is broken down by sector in **Table 6.7** on the following page. The estimates per sector are based on the ratios of the sectors shown in **Table 6.4** and **Figure 6.3** on Page 6-7.



**Table 6.7**  
**Projected Water Demand by Sector**

Sector	2025	2030	2035	2040	2045
Water Service Area Population	57,209	57,879	58,549	59,219	59,889
Consumption Rate (GPCD) <i>Including 0.5% Annual Passive Savings</i>	68.5	67	65.5	64	62.5
<b>Demands</b>					
Single Family Residential	879	869	860	850	839
Multi-Family Residential	2,001	1,980	1,958	1,935	1,911
Commercial	1,025	1,014	1,003	991	979
Institutional/Governmental	78	77	76	76	75
Industrial	49	48	48	47	47
Landscape Irrigation	15	14	14	14	14
Other	49	48	48	47	47
Agricultural	2	2	2	2	2
<b>Total Water Sales:</b>	<b>4,098</b>	<b>4,052</b>	<b>4,009</b>	<b>3,962</b>	<b>3,914</b>
Unaccounted for Water	293	135	133	130	128
<b>Total Water Consumption</b> (Total Supply into System):	<b>4,391</b>	<b>4,187</b>	<b>4,142</b>	<b>4,092</b>	<b>4,042</b>



**Figure 6.8: Projected Water Demand by Sector (in 2045)**

# Section 7

## Reliability Planning

*Former Gov. Schwarzenegger's signing of the 2009 Water Conservation Act enforces a mandatory conservation of up to 20% by 2020 that applies to Urban Water Management Plans. Severe droughts, including the most recent State drought of 2011-2017, highlight the need for strong water supply management and storage, including groundwater recharge at the Rio Hondo (shown below).*





## RELIABILITY PLANNING



*The Rio Hondo Spreading Grounds (pictured) provide groundwater recharge for the Central Basin.*

### 7.1 OVERVIEW

Drought conditions continue to be a critical issue for Southern California's water supply. The current drought of 2020-2021 is impacting deliveries of imported water to Southern California cities. The documented deliveries of water from the State Water Project (SWP) for Water Year 2020 (October 1<sup>st</sup> 2019 to September 30 2020) indicate that the volume of water delivered to SWP Contractors was the lowest since Water Year 2015. Therefore, it is important that agencies manage water consumption and reduce reliance on imported water through local groundwater and surface water supplies. Water agencies should prepare for

prolonged droughts for up to five (5) years to ensure a reliable supply of water.

This section discusses local and regional efforts to ensure a reliable supply of water. This section also compares projected supply to projected demand over a 25-year planning period (through 2045) for various climate scenarios. Demand and supply projections are provided in **Tables 7.1 - 7.9**.

### 7.2 HISTORIC DROUGHTS

Climate data has been recorded in California since 1858. Since then, California has experienced several periods of severe drought, including: 1928-34, 1976-77 and



1987-91, 2007-2009, and most recently in 2011-2017. In addition to these, California has also experienced several periods of less severe drought. Among the aforementioned droughts, the year 1977 is still considered to be the driest year of record in the Four Rivers Basin by DWR (these rivers flow into the Delta and are the source of water for the State Water Project).

In 1983, as a result of previous droughts, the State legislature enacted the UWMP Act, which requires the preparation of this UWMP. Several subsequent amendments have been made to the Act to ensure such items as public coordination, recycled water, and contingency response plans are included in UWMPs, among other items.

In 1991, as a result of the 1987-1991 drought, over 100 water agencies and environmental groups came together to form the California Urban Water Conservation Council (CUWCC) to manage the impacts of drought and promote water conservation. In January 2018, the CUWCC became the California Water Efficiency Partnership (CalWEP), and consists of over 200 water agencies and private companies. CalWEP assists its member agencies with public policy, research, and education tools.

As a result of the drought of 2007-2009, Governor Arnold Schwarzenegger signed the Water Conservation Act of 2009 (SBx7-7), which is perhaps the strongest piece of

legislation to date on water conservation, requiring mandatory water conservation up to 20 percent by 2020.

At the local level, water agencies have enacted their own ordinances to deal with the impacts of drought. **Section 6.5 of the City's Municipal Code** deals with Water Conservation. In addition, the City has adopted several recent ordinances in response to the recent drought of 2011-2017. This includes the recent resolution 2014-25 as indicated in the City's 2015 UWMP. More on the City's code and ordinances can be found in **Section 8**.

### 7.3 RECENT DROUGHT (2011-2017)

A significant and prolonged drought hit the state of California in 2011-2017. The drought depleted reservoir levels all across the state, as reflected by **Figure 7.1** on the following page. In January of 2014, Governor Brown declared a state of emergency and directed state officials to take all necessary actions to prepare for water shortages. As the drought prolonged into 2015, Governor Brown gave an executive order in April 2015 which mandated a statewide 25% reduction in water use.

In January of 2016, DWR and the U.S. Bureau of Reclamation finalized the 2016 Drought Contingency Plan that outlined State



**Figure 7.1: Lake Oroville During Recent State Drought of 2011-2017**

Water Project and Central Valley Project operations for February 2016 to November 2016. The plan was developed in coordination with staff from State and federal agencies. One of the key purposes of the plan was to communicate goals for water management and the potential operations needed to achieve those goals for water resources stakeholders and the public. The plan was updated in 2020 to reflect the recently dry conditions of 2019-2020.

Although the recent droughts have more significantly impacted northern and central-valley agencies that use SWP water for agriculture, the City is indirectly impacted by the recent drought conditions on

Northern California Waters because this water source is the major supply of water imported from Central Basin (via MWD).

To date, California agencies have reduced water use by about 25 percent since the emergency conservation regulations took effect in June of 2015. This continues to meet Governor Brown's 25 percent mandate (despite a decline in the statewide water-savings rate for the last two months).

#### 7.4 STATE WATER SUPPLY RELIABILITY

As a result of continued drought challenges to the State's water supplies, SWP Contractors understand the unpredictability of imported water allocations from the SWP.



**Figure 7.2: Lake Oroville at End of State Drought (Feb 2017)**

With participation of the SWP Contractors, DWR strives to meet the water needs of Southern California by developing new projects to increase the capacity of its supplies while encouraging its member agencies to develop local supply projects to meet the needs of its customers. Also, DWR is committed to developing and maintaining high-capacity storage reservoirs, including both those which are DWR-owned and Contractor-owned (such as Diamond Valley Lake, an MWD-owned reservoir -the largest in Southern California), to meet the needs during times of drought and emergency.

The large reservoirs help to avoid the repercussions of reduced supplies not only

from the SWP, but also the Colorado River Aqueduct (CRA). Throughout the Los Angeles Region, a total of three (3) DWR-owned reservoirs, nine (9) MWD-owned reservoirs, and twenty-four (24) SDCWA reservoirs contain up to 2.2 million acre-feet (MAF) of water storage.

#### **7.4.1 State Water Project (SWP) Reliability**

As a SWP contractor, MWD has a “Table A” allocation of up to 1.8 MAF (million acre-feet). Since MWD began receiving SWP water in 1976, the average amount of SWP water received by MWD each year is just under 1.0 MAF. On an annual basis, each of the 29 SWP Contractors, request an amount

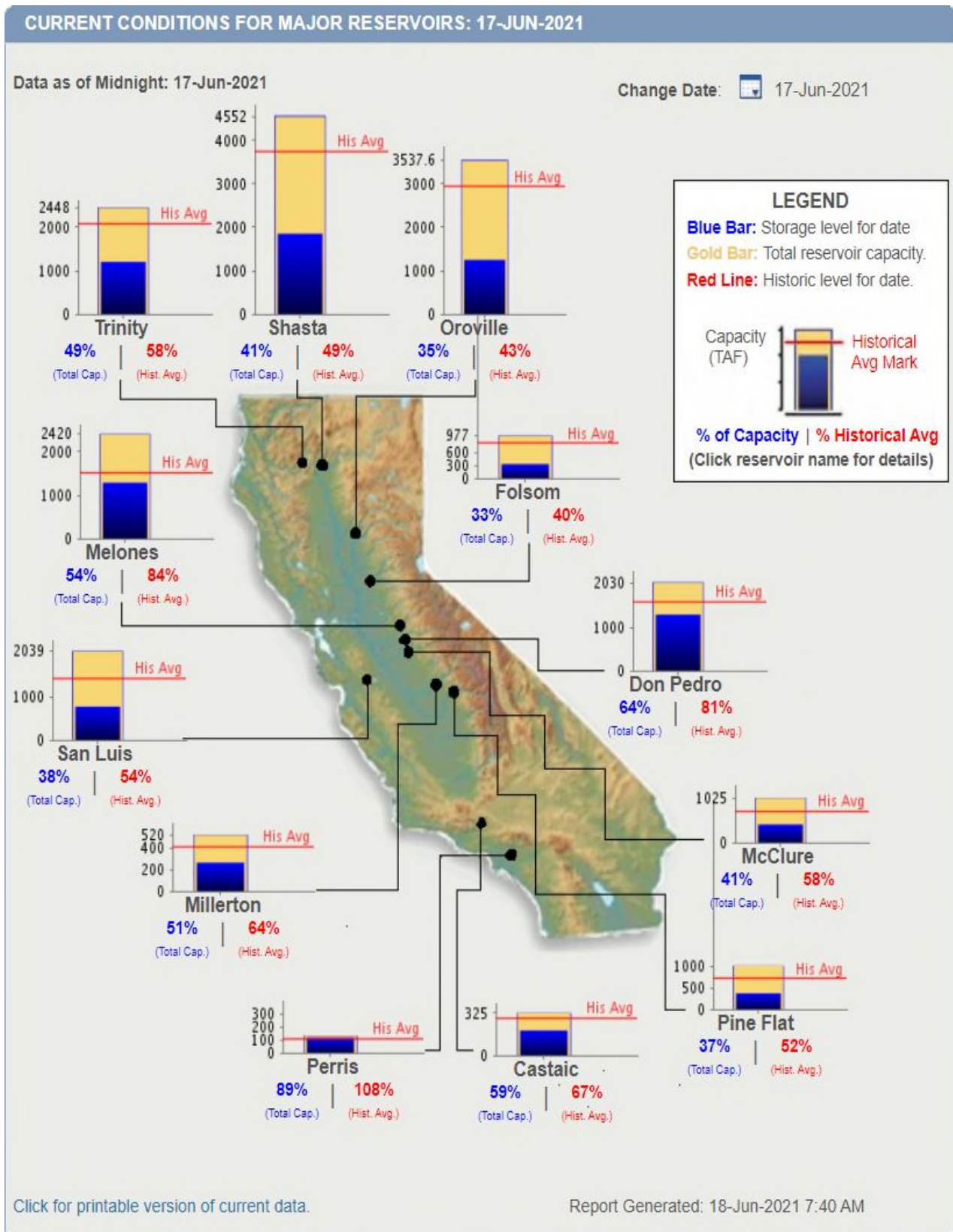


Figure 7.3: California State Reservoir Levels (June 2021)

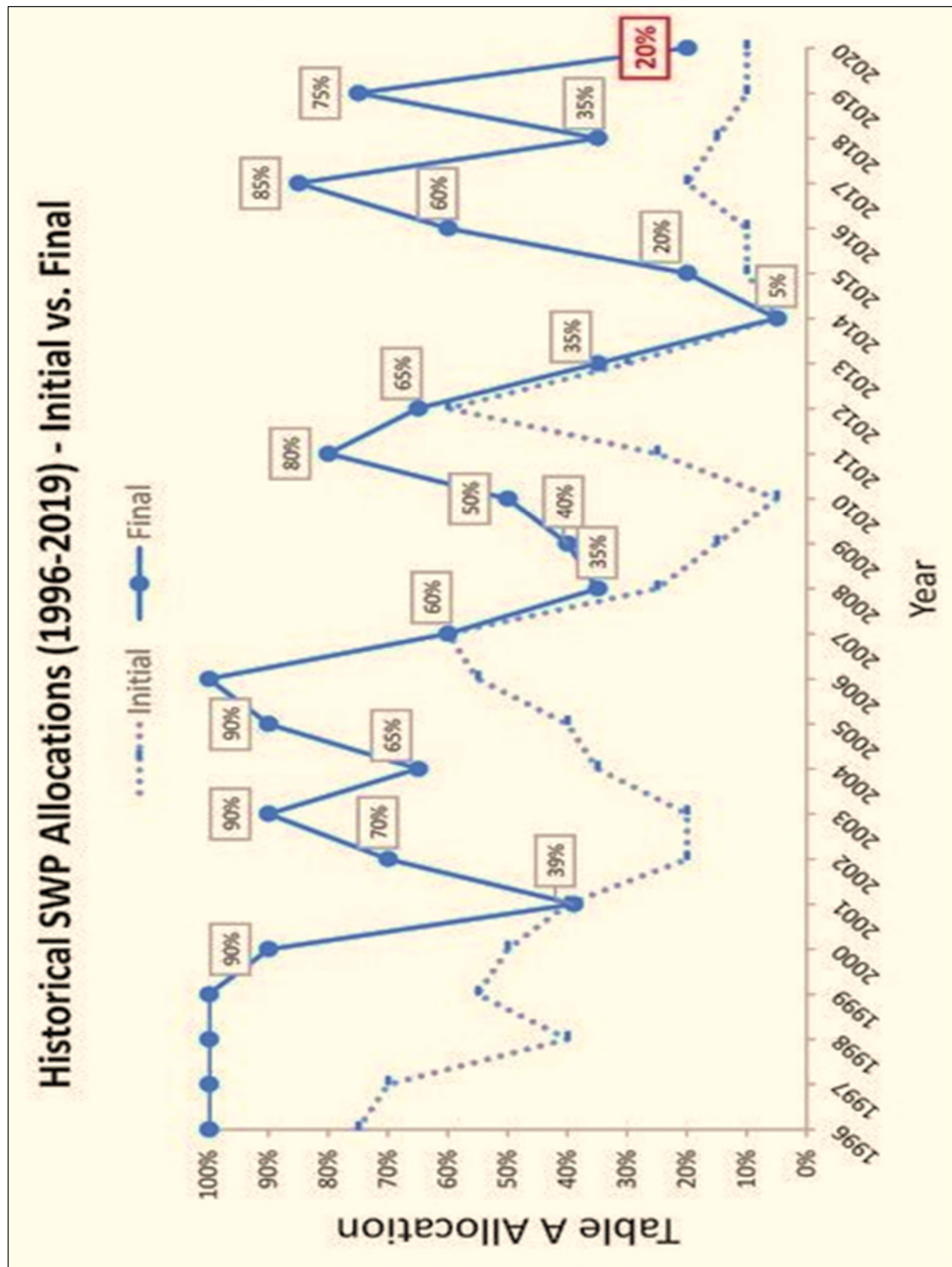


Figure 7.4: SWP Table A Deliveries



of SWP water based on their anticipated yearly demand. Each SWP contractor's Water Supply Contract contains a "Table A" amount that identifies the maximum amount of water that a contractor may request. However, the amount of SWP water actually allocated to contractors each year is dependent on a number of factors

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*SWP supplies are typically less than the maximum "Table A" amounts requested by the Contractors each year.*

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than can vary significantly from year to year. The availability of SWP supplies is generally less than their full Table A amounts in many years and can be significantly less in

very dry years. After receiving the requests, DWR assesses the amount of water supply available based on precipitation, snow pack on Northern California watersheds, volume of water in storage, projected carry over storage, and Sacramento-San Joaquin Bay Delta regulatory requirements. For example, according to the State Water Project Delivery Reliability Report 2019, the total SWP annual delivery of water to contractors ranged from a low of 477 TAF in 2014 to a high of 3.4 MAF in 2017.

Due to the uncertainty in water supply, contractors are not typically guaranteed their full Table A amount, but instead a percentage of that amount based on available supply. For instance, the current

DWR Notice to Contractors 20-06 (December 2020) indicates that the initial allocation is set at 10%, which is down from the Contractor's request for a 15% initial allocation. for all Contractors. For MWD, the initial allocation is set at 191 TAF.

The reliability of the SWP impacts the Contractors ability to plan for future growth and supply. SWP Contractors such as MWD can seek out other local supply sources or transfer agreements (such as transfers with Colorado River rights holders). Although not directly important for the City, matters involving the SWP do impact the City and Central Basin indirectly.

#### 7.4.2 Colorado River Reliability

Water supply from the Colorado River continues to be a critical issue for MWD as the state of California as a whole competes with several other States for Colorado River water supplies. The hydrology of the Colorado River Basin is known to be highly variable. In the past 20 years, the Lower Colorado River Basin has been suffering from its own drought (in addition to the droughts across California). Average flows in the lower basin from 2000 to 2018 have averaged 12.4 MAFY (million-acre-feet-per-year), down from the historical average of about 15 MAFY. Recent data indicated that total Colorado River Basin storage (primarily Lake Powell and Lake Mead) was 29 MAF at



**Figure 7.5: Colorado River Basin**



**Figure 7.6: All-American Canal Lining Project Improves Reliability of Colorado River Supplies**

the beginning of water year 2021. This was a decrease of about 2.8 MAF of total storage that was in the system at the beginning of water year 2020 (about 32 MAF). Both of these volumes are just half of the capacity of the system (about 60 MAF).

As a result of the ongoing drought in the lower basin, in 2014, the Secretary of the Interior tasked the Colorado River Basin States with developing drought contingency plans. As part of this process, the Lower Basin States (California, Arizona, and Nevada) signed a Memorandum of Understanding (MOU) which seeks to ensure an additional 3.0 MAF of water

would be preserved in Lake Mead through 2019. As for California parties, the needs of the Colorado River water users, including MWD, will continue to be met due to the security provided by the Law of the River as well as effective implementation of conservation and transfer agreements.

### ***Improving Colorado River Supply Reliability***

Studies in the 1990s concluded that up to 70,000 acre-feet per year of water was lost due to seepage along a 23-mile section of the All-American Canal running through the sand dunes before reaching the Imperial Valley. For years, the costs to solve this



issue were prohibitive. In 1998, however, \$235 million was appropriated for a water project that ensures continued flows from the Colorado River. This included lining of the All-American Canal or to recover seepage from it. Of that appropriation, \$200 million was used to concrete line part of the All-American Canal and its Coachella branch. The remaining \$35 million went to increase underground water storage along the Colorado River aqueduct (north of the Canal).

Construction on the All-American Canal began in 2007 which consisted of a new 23-

*Canal lining or re-lining can save thousands of acre-feet of water per year.*

mile concrete canal parallel to the existing earthen canal. The project was completed in 2009, and the flows were then transferred to the concrete lined

canal. The new concrete lined section of the All-American Canal will conserve about 70,000 acre-feet per year of Colorado River water that was previously lost to seepage.

## 7.5 COMPETITION FOR WATER RIGHTS

For Colorado River rights holders, the *Law of the River* is essentially a compilation of numerous compacts, state and federal laws, court decisions and decrees, contracts, and regulatory guidelines which define rights to water from the Colorado River. These

documents apportion the water and regulate the use and management of the Colorado River among the seven basin states and Mexico. A brief listing of these items is as follows:

- Colorado River Compact (1922)
- Boulder-Canyon Project Act (1928)
- CA Seven Party Agreement (1931)
- Arizona v. California (1964)
- CO River Basin Project Act (1968)
- Arizona v. California (1979)
- Quantification Settlement Agreement (2003)

Per the 2003 Quantification Settlement Agreement (QSA), California's allocation has been confirmed at 4.4 MAF per year (per the 1931 Agreement). MWD maintains a "4<sup>th</sup> Priority" right of 550 TAF, and a "5<sup>th</sup>" priority right of 662 TAF. The 5<sup>th</sup> priority right is only available to MWD if surpluses are declared in the Colorado River Basin storage or if unused supplies from other rights holders in the State are available. agencies have significant influence over water supply policy in Southern California.

## 7.6 CITY SUPPLY RELIABILITY

As the City obtains its water sources from local groundwater and imported water, MWD's reliability of supply has direct



impact on the City. Population growth will also continue to be a factor in future reliability projections. Since the City is pursuing 100 percent local groundwater sustainability, having continued access to imported water increases the City's supply reliability.



Figure 7.7: SBx7-7 Conservation Requirements

Tables 2.4 to 2.6 of MWD's 2020 UWMP shows supply reliability projections for average, single-dry, and multiple-dry years through the year 2045. The data in these tables is important to effectively project and analyze supply and demand over the next 25 years for many regional agencies. As indicated in these tables, projected supply will exceed projected demands in all years. The data contained in these tables has an effect on the City's imported supply capacity, and thus this data will also be used to develop the City's projected supply and demand over the next 25 years. As such, the data contained in these tables is consolidated into **Tables 7.1 and 7.2** on the following pages.

### 7.6.1 Drought Risk Assessment

The drought risk assessment is an assessment of the reliability of the City's water supplies by comparing projected future water demands with expected available water supplies under three different hydrologic conditions: normal year; a single dry year; and multiple dry years. Future supply and demand conditions can be determined from the following data:

- Population forecasts
- Water supply capacity
- Recent water use trends

The data described above has been provided in the previous sections of this UWMP, including **Section 3** (Water Sources & Supplies), and **Section 6** (Water Use). The projected comparisons in this Section are based on data from those previous sections.

#### ***Basis for Projected Demands***

To project future demands, it will be assumed that total demand will change annually based on changes in population multiplied by the individual demand per person (also known as the "per-capita" consumption rate -see **Section 6**). The per-capita rates used in the future projections will be based on actual water use data from the recent past. In particular, the City's averages for pears years will be used as the



basis to project demands through the year 2045. To project demands and supplies, the following is assumed:

- Consumption rate of 70 gallons per capita per day (GPCD) in 2020. This is the average consumption of the City in the last 20 years.
- *Decreasing* consumption rate (from 70 GPCD) starting in 2021 with a passive savings of 0.5% annually.

A decreasing consumption rate scenario provides a more-realistic basis for planning purposes since it considers gradual improvements in water-use efficiency. In the past 20 years, the City has seen a decrease in water consumption rates.

For drought-time demands, is expected that there will be a small degree of increase due to the lack of rainfall on landscapes. To project demands during single and multiple (five) year drought periods, the following increase factors will be assumed:

- Dry Year: 5%
- Multiple Dry Years: 5%, 8%, and 2%

During the drought of 2011 to 2017, the region experienced an increase in per-capita demands ranging from about 2% to 8% or more. In two of these years (2014 & 2015), the per-capita demands decreased for some agencies, due to the State's water

emergency declaration. Nevertheless, the increase factors listed above are reasonable estimates of increases in water use for irrigation during dry-years.

### ***Basis for Projected Supplies***

As for projected supplies, the City can expect imported supplies to be based off of the capacity of its connection with Central Basin and its adjudicated groundwater pumping rights. As mentioned in **Section 3**, additional supplies may be available through the leasing of groundwater rights with adjacent agencies. However, the City's current pumping capacity is unable to extract additional volumes beyond its adjudicated rights. Therefore, the City can expect up to 5,100 AFY of water to be available to the City. A breakdown of the supply described above is provided under **Table 7.3**.

### ***Tabular Comparisons***

Tables **7.3** to **7.9**, shown on the following pages, provide an analysis of the City's supply and demand projections through the year 2045. **Figures 7.8 to 7.10** show a visual pie-chart for different water year scenarios. Based on the data contained in these tables, the City can expect to meet future demands for all climate conditions through 2045. The surplus in supply for the City indicates that the City can focus its efforts more on water conservation as opposed to new water supply projects.



**Table 7.1**  
**MWD Regional Imported Water Supply Reliability Projections**  
**Normal Water Year (AF)**

Region Wide Projections	2025	2030	2035	2040	2045
<b>Supply Information</b>					
<b>Projected Supply</b>	3,932,000	3,962,000	3,960,000	3,598,000	3,622,000
<b>Demand Information</b>					
<b>Projected Demand</b>	1,274,000	1,256,000	1,273,000	1,294,000	1,319,000
<b>Surplus</b>					
<b>Projected Surplus</b>	2,658,000	2,706,000	2,687,000	2,304,000	2,303,000
<b>Programs Under Development</b>					
<b>Projected Capability of Programs</b>	47,000	13,000	13,000	372,000	347,000
<b>Potential Surplus</b>					
<b>Projected Surplus: Average Year</b>	2,705,000	2,719,000	2,700,000	2,676,000	2,650,000
<b>Comparisons</b>					
<b>Projected Normal Yr. Supply/Demand (%)</b>	309%	315%	311%	278%	275%

Notes:

1. Data is Taken from Tables 2-5 and 2-6 of MWD's 2020 Urban Water Management Plan.
2. Table shows that MWD has the capacity to meet demand for all years under normal climatic conditions.
3. As a member agency of MWD, Central Basin can expect 100% reliability in its supplies from MWD through 2045.
4. As a retail agency of Central Basin, City can expect 100% reliability of its imported supplies from Central Basin under normal climatic conditions.



**Table 7.2**  
**MWD Regional Imported Water Supply Reliability Projections**  
**Multiple Dry Years (AF)**

Region Wide Projections	2025	2030	2035	2040	2045
<b>Supply Information</b>					
<b>Projected Supply</b>	2,198,000	2,210,000	2,209,000	1,973,000	1,995,000
<b>Demand Information</b>					
<b>Projected Demand</b>	1,412,000	1,414,000	1,435,000	1,457,000	1,484,000
<b>Surplus</b>					
<b>Projected Surplus</b>	<b>786,000</b>	<b>796,000</b>	<b>774,000</b>	<b>516,000</b>	<b>511,000</b>
<b>Programs Under Development</b>					
<b>Projected Capability of Programs</b>	10,000	0	0	235,000	213,000
<b>Potential Surplus</b>					
<b>Projected Surplus: Multiple Dry Years</b>	<b>796,000</b>	<b>796,000</b>	<b>774,000</b>	<b>751,000</b>	<b>724,000</b>
<b>Comparisons</b>					
<b>Projected Mult. Dry Yrs. Supply/Demand (%)</b>	<b>156%</b>	<b>156%</b>	<b>154%</b>	<b>135%</b>	<b>134%</b>

Notes:

1. Data is Taken from Tables 2-5 and 2-6 of MWD's 2020 Urban Water Management Plan.
2. Table shows that MWD has the capacity to meet demand for all years under multiple dry year conditions.
3. As a member agency of MWD, Central Basin can expect 100% reliability in its supplies from MWD through 2045.
4. As a retail agency of Central Basin, City can expect 100% reliability of its imported supplies from Central Basin during multiple dry year conditions.



**Table 7.3**  
**City of Huntington Park Water Supply Availability & Demand Projections**  
**Normal Water Year (AF)**

Water Sources	2025	2030	2035	2040	2045
<b>Population</b>					
Water Service Area Population	57,209	57,879	58,549	59,219	59,889
Consumption Rate (GPCD) <i>Including 0.5% Annual Passive Savings</i>	68.5	67	65.5	64	62.5
<b>Supply</b>					
Imported Water (Central Basin)	1,247	1,247	1,247	1,247	1,247
Groundwater (Adjudicated Wells)	3,853	3,853	3,853	3,853	3,853
<b>Total Supply</b>	<b>5,100</b>	<b>5,100</b>	<b>5,100</b>	<b>5,100</b>	<b>5,100</b>
<b>Demand</b>					
<b>Total Normal Demand</b>	<b>4,390</b>	<b>4,344</b>	<b>4,296</b>	<b>4,245</b>	<b>4,193</b>
Compare to Avg. Demand for Previous 5 Yrs. (4,155 AF)	106%	105%	103%	102%	101%
<b>Supply/Demand Comparison</b>					
Supply-Demand (Difference)	710	756	804	855	907
Supply/Demand (%)	116%	117%	119%	120%	122%

Notes:

- Total Demand = Consumption Rate x Population
  - Average consumption rate of last 20 years: Approx. 70 gallons per capita per day
  - Starting Consumption Rate in 2021: 70 gpcd
  - Projected “passive” savings: 0.5% per year = 62.5 gpcd by 2045.**
- Groundwater Supplies based on the City’s adjudicated pumping right of **3,853 AFY**.
- Imported Water Supply represents supply available to City, if needed, based on the total capacity of the City’s imported connection with Central Basin (10 cfs), operating during daytime hours (12 hours) for about four (4) months per year (1,205 AFY). This number is increased slightly to 1,247 AFY to make total supply rounded to an even number of 5,100 AFY.
  - Rated capacity = 10 cfs gpm (4,488 gpm) = 7,239 AFY
  - 7,239 AFY x 50% (Daytime Hours) x 33% (Wet Months) = 1,205 AFY.
  - Round to **1,247 AFY**
- Total available supply in all years: 3,853 AFY + 1,247 AFY = **5,100 AFY**.



**Table 7.4**  
**City of Huntington Park Water Supply Availability & Demand Projections**  
**Single Dry Year (AF)**

Water Sources	2025	2030	2035	2040	2045
<b>Population</b>					
Water Service Area Population	57,209	57,879	58,549	59,219	59,889
Consumption Rate (GPCD) <i>Including 0.5% Annual Passive Savings</i>	68.5	67	65.5	64	62.5
<b>Supply</b>					
Imported Water (Central Basin)	1,247	1,247	1,247	1,247	1,247
Groundwater (Adjudicated Wells)	3,853	3,853	3,853	3,853	3,853
<b>Total Supply</b>	<b>5,100</b>	<b>5,100</b>	<b>5,100</b>	<b>5,100</b>	<b>5,100</b>
Normal Year Supply	5,100	5,100	5,100	5,100	5,100
% of Normal Year	100%	100%	100%	100%	100%
<b>Demand</b>					
<b>Total Dry Demand</b>	<b>4,609</b>	<b>4,561</b>	<b>4,510</b>	<b>4,458</b>	<b>4,402</b>
Normal Year Demand	4,390	4,344	4,296	4,245	4,193
% of Normal Year	105%	105%	105%	105%	105%
<b>Supply/Demand Comparison</b>					
Supply/Demand Difference	491	539	590	642	698
Supply/Demand (%)	111%	112%	113%	114%	116%

Notes:

1. Total Demand = Consumption Rate x Population x Single Dry Year Increase of 105%.
2. All other items derived in similitude to Table 7.3.



**Table 7.5**  
**City of Huntington Park Water Supply Availability & Demand Projections**  
**Multiple Dry Years (2021-2025) (AF)**

Water Sources	2021	2022	2023	2024	2025
<b>Population</b>					
Water Service Area Population	56,680	56,822	56,964	57,107	57,209
Consumption Rate (GPCD) <i>Including 0.5% Annual Passive Savings</i>	70.0	69.7	69.3	69.0	68.5
<b>Supply</b>					
Imported Water (Central Basin)	1,247	1,247	1,247	1,247	1,247
Groundwater (Adjudicated Wells)	3,853	3,853	3,853	3,853	3,853
<b>Total Supply</b>	<b>5,100</b>	<b>5,100</b>	<b>5,100</b>	<b>5,100</b>	<b>5,100</b>
Normal Year Supply	5,100	5,100	5,100	5,100	5,100
% of Normal Year	100%	100%	100%	100%	100%
<b>Demand</b>					
<b>Total Dry Year Demand</b>	<b>4,667</b>	<b>4,788</b>	<b>4,510</b>	<b>4,499</b>	<b>4,477</b>
Normal Year Demand	4,444	4,433	4,422	4,411	4,390
% of Normal Year	105%	108%	102%	102%	102%
<b>Supply/Demand Comparison</b>					
Supply/Demand Difference	433	312	590	601	623
Supply/Demand (%)	109%	107%	113%	113%	114%

**Notes:**

1. Total Demand = Consumption Rate x Population x Multiple Dry Year Increases of 105%, 108%, and 102%.
2. All other items derived in similitude to Table 7.3.



**Table 7.6**  
**City of Huntington Park Water Supply Availability & Demand Projections**  
**Multiple Dry Years (2026-2030) (AF)**

Water Sources	2026	2027	2028	2029	2030
<b>Population</b>					
Water Service Area Population	57,352	57,495	57,639	57,783	57,879
Consumption Rate (GPCD) <i>Including 0.5% Annual Passive Savings</i>	68.3	67.9	67.6	67.2	67.0
<b>Supply</b>					
Imported Water (Central Basin)	1,247	1,247	1,247	1,247	1,247
Groundwater (Adjudicated Wells)	3,853	3,853	3,853	3,853	3,853
<b>Total Supply</b>	<b>5,100</b>	<b>5,100</b>	<b>5,100</b>	<b>5,100</b>	<b>5,100</b>
Normal Year Supply	5,100	5,100	5,100	5,100	5,100
% of Normal Year	100%	100%	100%	100%	100%
<b>Demand</b>					
<b>Total Dry Year Demand</b>	<b>4,605</b>	<b>4,725</b>	<b>4,451</b>	<b>4,440</b>	<b>4,431</b>
Normal Year Demand	4,386	4,375	4,364	4,353	4,344
% of Normal Year	105%	108%	102%	102%	102%
<b>Supply/Demand Comparison</b>					
Supply/Demand Difference	495	375	649	660	669
Supply/Demand (%)	111%	108%	115%	115%	115%

Notes:

1. Total Demand = Consumption Rate x Population x Multiple Dry Year Increases of 105%, 108%, and 102%.
2. All other items derived in similitude to Table 7.3.



**Table 7.7**  
**City of Huntington Park Water Supply Availability & Demand Projections**  
**Multiple Dry Years (2031-2035) (AF)**

Water Sources	2031	2032	2033	2034	2035
<b>Population</b>					
Water Service Area Population	58,024	58,169	58,314	58,460	58,549
Consumption Rate (GPCD) <i>Including 0.5% Annual Passive Savings</i>	66.6	66.2	65.9	65.6	65.5
<b>Supply</b>					
Imported Water (Central Basin)	1,247	1,247	1,247	1,247	1,247
Groundwater (Adjudicated Wells)	3,853	3,853	3,853	3,853	3,853
<b>Total Supply</b>	<b>5,100</b>	<b>5,100</b>	<b>5,100</b>	<b>5,100</b>	<b>5,100</b>
Normal Year Supply	5,100	5,100	5,100	5,100	5,100
% of Normal Year	100%	100%	100%	100%	100%
<b>Demand</b>					
<b>Total Dry Year Demand</b>	<b>4,544</b>	<b>4,662</b>	<b>4,392</b>	<b>4,381</b>	<b>4,382</b>
Normal Year Demand	4,327	4,316	4,305	4,295	4,296
% of Normal Year	105%	108%	102%	102%	102%
<b>Supply/Demand Comparison</b>					
Supply/Demand Difference	556	438	708	719	718
Supply/Demand (%)	112%	109%	116%	116%	116%

Notes:

1. Total Demand = Consumption Rate x Population x Multiple Dry Year Increases of 105%, 108%, and 102%.
2. All other items derived in similitude to Table 7.3.



**Table 7.8**  
**City of Huntington Park Water Supply Availability & Demand Projections**  
**Multiple Dry Years (2036-2040) (AF)**

Water Sources	2036	2037	2038	2039	2040
<b>Population</b>					
Water Service Area Population	58,695	58,842	58,989	59,137	59,219
Consumption Rate (GPCD) <i>Including 0.5% Annual Passive Savings</i>	64.9	64.6	64.3	64.1	64.0
<b>Supply</b>					
Imported Water (Central Basin)	1,247	1,247	1,247	1,247	1,247
Groundwater (Adjudicated Wells)	3,853	3,853	3,853	3,853	3,853
<b>Total Supply</b>	<b>5,100</b>	<b>5,100</b>	<b>5,100</b>	<b>5,100</b>	<b>5,100</b>
Normal Year Supply	5,100	5,100	5,100	5,100	5,100
% of Normal Year	100%	100%	100%	100%	100%
<b>Demand</b>					
<b>Total Dry Year Demand</b>	<b>4,482</b>	<b>4,599</b>	<b>4,332</b>	<b>4,331</b>	<b>4,330</b>
Normal Year Demand	4,269	4,258	4,248	4,246	4,245
% of Normal Year	105%	108%	102%	102%	102%
<b>Supply/Demand Comparison</b>					
Supply/Demand Difference	618	501	768	769	770
Supply/Demand (%)	114%	111%	118%	118%	118%

Notes:

1. Total Demand = Consumption Rate x Population x Multiple Dry Year Increases of 105%, 108%, and 102%.
2. All other items derived in similitude to Table 7.3.

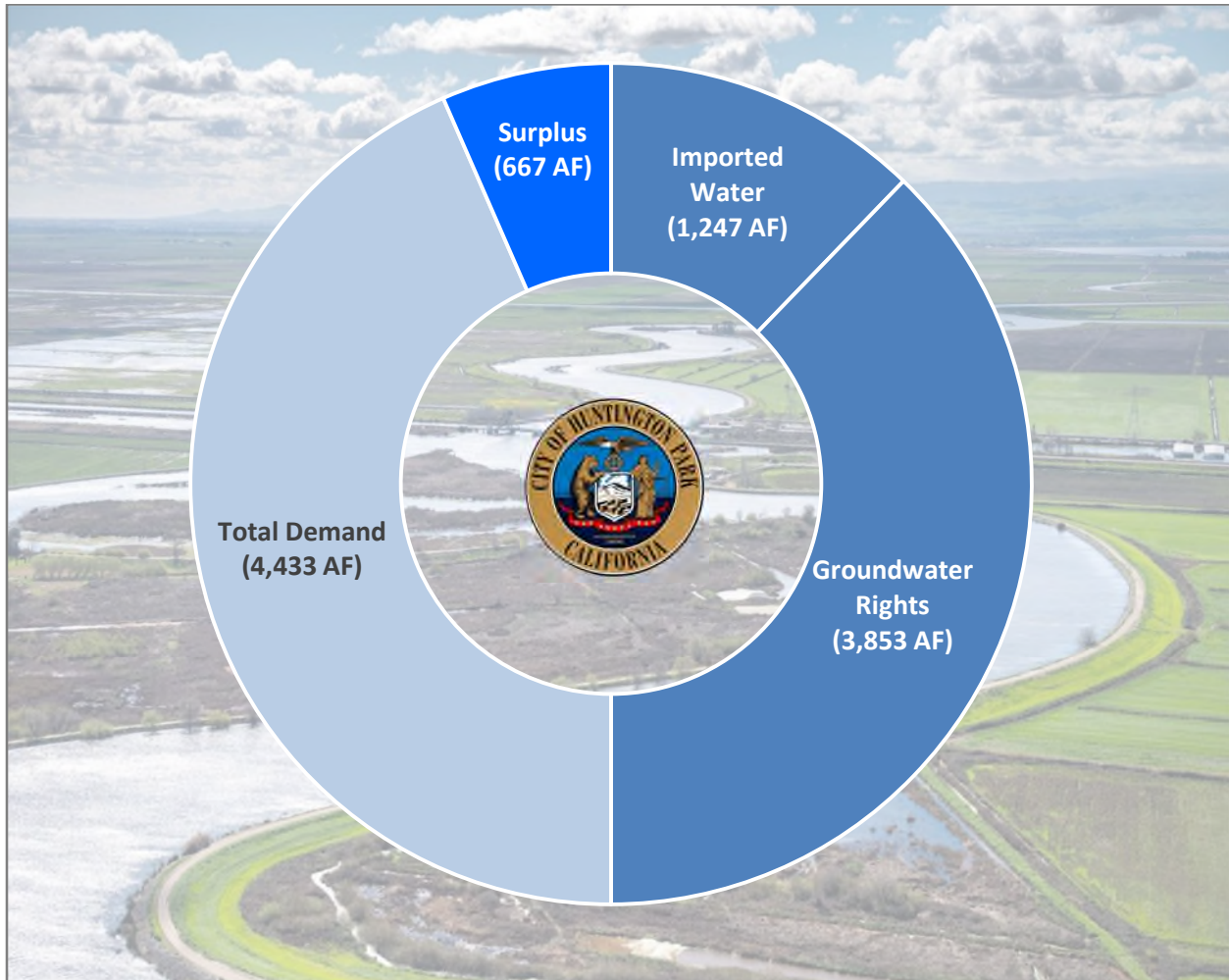


**Table 7.9**  
**City of Huntington Park Water Supply Availability & Demand Projections**  
**Multiple Dry Years (2041-2045) (AF)**

Water Sources	2041	2042	2043	2044	2045
<b>Population</b>					
Water Service Area Population	59,367	59,515	59,664	59,813	59,889
Consumption Rate (GPCD) <i>Including 0.5% Annual Passive Savings</i>	63.6	63.3	63.0	62.7	62.5
<b>Supply</b>					
Imported Water (Central Basin)	1,247	1,247	1,247	1,247	1,247
Groundwater (Adjudicated Wells)	3,853	3,853	3,853	3,853	3,853
<b>Total Supply</b>	<b>5,100</b>	<b>5,100</b>	<b>5,100</b>	<b>5,100</b>	<b>5,100</b>
Normal Year Supply	5,100	5,100	5,100	5,100	5,100
% of Normal Year	100%	100%	100%	100%	100%
<b>Demand</b>					
<b>Total Dry Year Demand</b>	<b>4,441</b>	<b>4,556</b>	<b>4,292</b>	<b>4,282</b>	<b>4,277</b>
Normal Year Demand	4,229	4,219	4,208	4,198	4,193
% of Normal Year	105%	108%	102%	102%	102%
<b>Supply/Demand Comparison</b>					
Supply/Demand Difference	659	544	808	818	823
Supply/Demand (%)	115%	112%	119%	119%	119%

Notes:

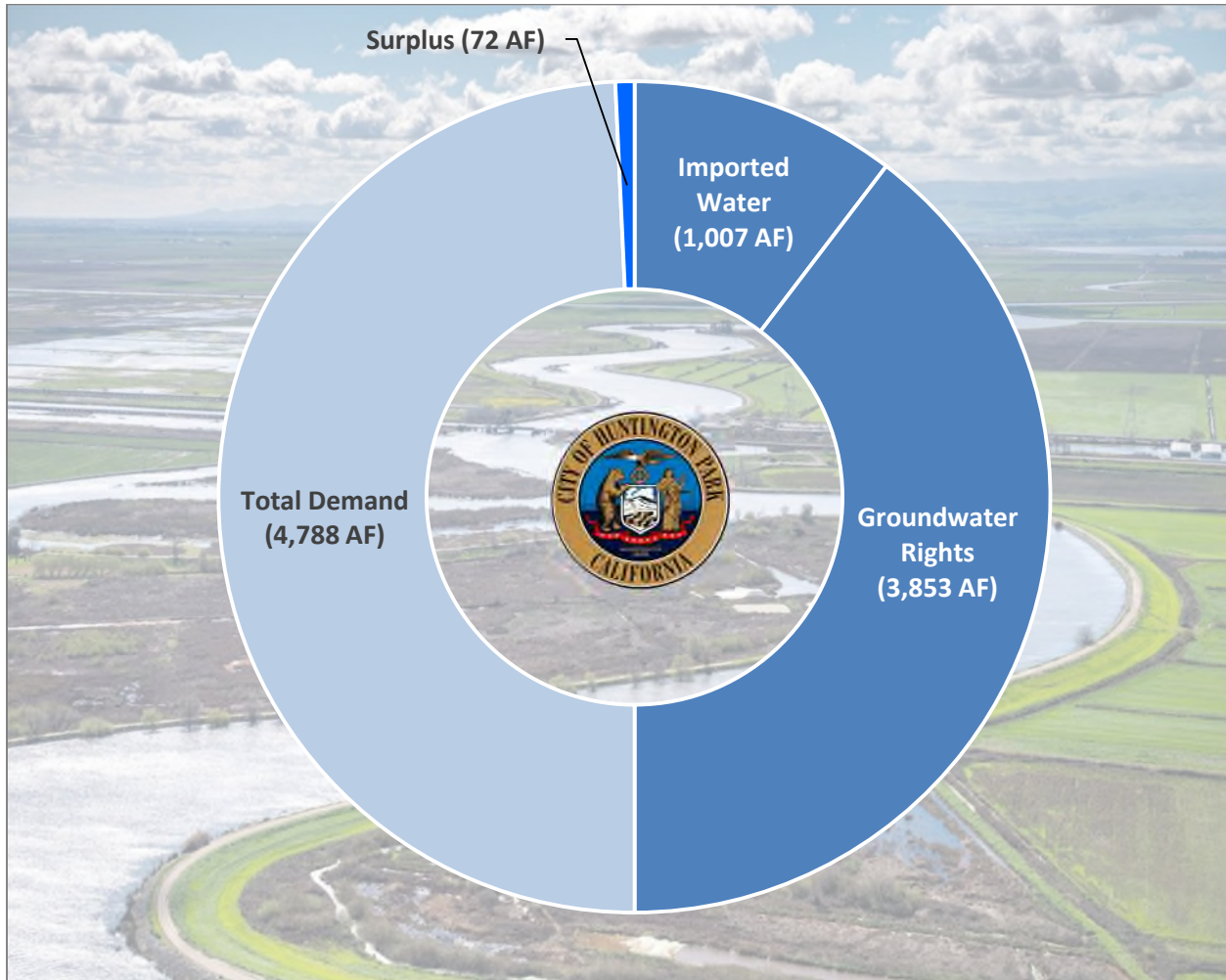
1. Total Demand = Consumption Rate x Population x Multiple Dry Year Increases of 105%, 108%, and 102%.
2. All other items derived in similitude to Table 7.3.



**Figure 7.8: Projected Normal Water Scenario: Year 2022**

**Notes:**

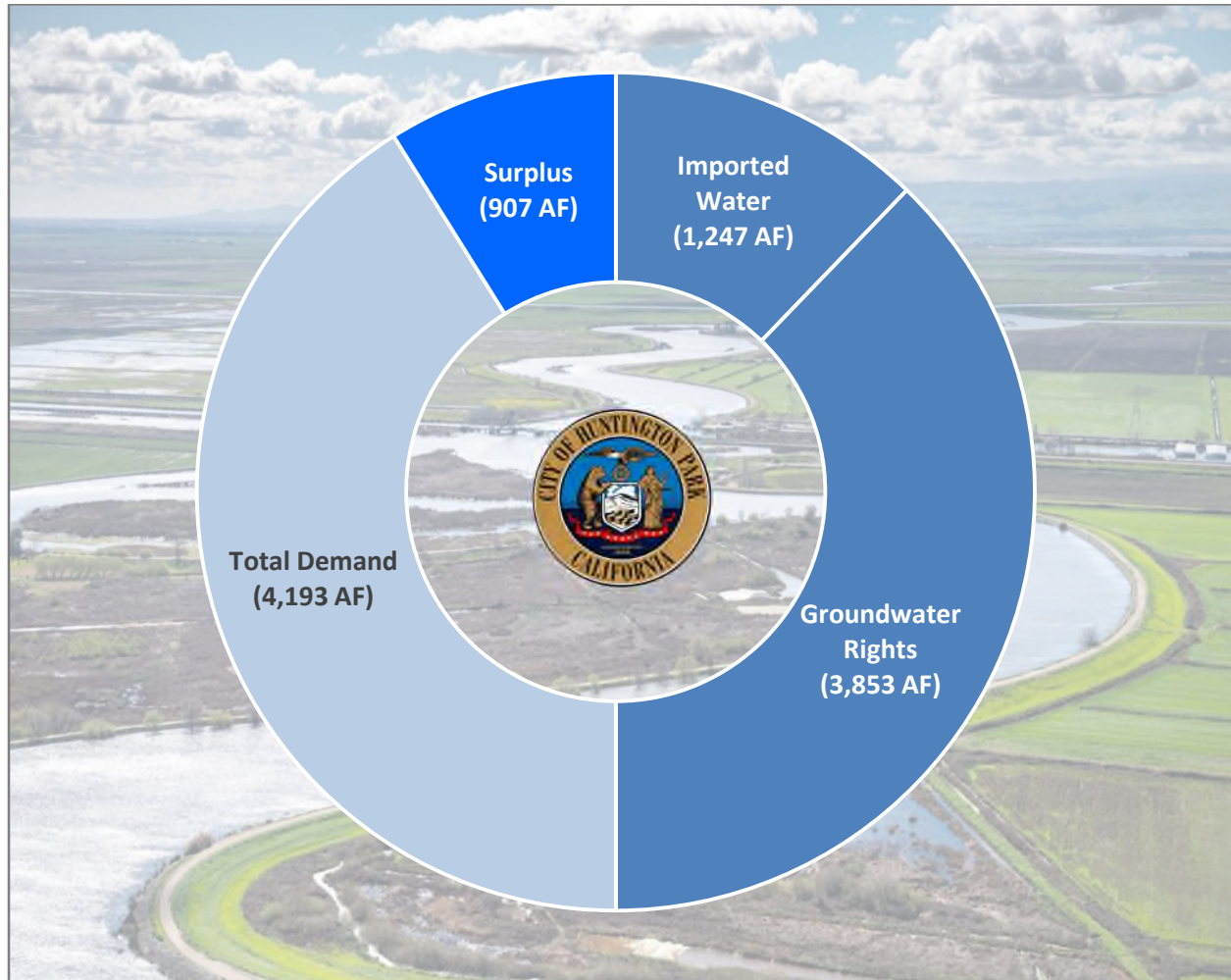
1. See Notes Under Table 7.3.
2. Surplus = Total Available Supply – Total Demand = 5,100 AF – 4,433 AF = 667 AF.



**Figure 7.9: Projected Minimum 3-Year Water Scenario: Years 2022 - 2024**

**Notes:**

1. See Notes Under Table 7.3.
2. Under this Scenario, Groundwater Lease from the City of South Gate would be Unavailable.
3. Under this Scenario, the MWD Water Supply Allocation Plan (WSAP) would be Implemented. Per Central Basin's Water Supply Allocation Model (Last Updated in Central Basin's 2015 UWMP), the City's Allocation would be Limited to 1,007 AF.
4. Surplus = Total Available Supply – Total Demand = 4,860 AF – 4,788 AF = 72 AF.



**Figure 7.10: Projected Normal Water Scenario: Year 2045**

Notes:

1. See Notes Under Table 7.3.
2.  $\text{Surplus} = \text{Total Available Supply} - \text{Total Demand} = 5,100 \text{ AF} - 4,213 \text{ AF} = 1,887 \text{ AF}.$



## 7.7 ENSURING ADEQUATE SUPPLY

As indicated by the tables on the previous pages, the City does not expect to have a water supply shortage through 2045. Groundwater supplies are not expected to be affected during droughts lasting up to five years. Likewise, as indicated by MWD's 2020 UWMP (shown in **Tables 7.1 and 7.2**), the City's imported supplies are expected to remain fully available during droughts lasting up to five years. Furthermore, droughts will be addressed by following the criteria of the City's Water Shortage Contingency Plan (WSCP) along with implementation of the regional contingency plans. These programs are discussed in **Section 8**. For these reasons, the City is confident that water supplies are adequate to meet demands for all weather conditions through 2045.

## 7.8 WSCP SUPPLY AUGMENTATION

Although the City does not expect to have a water supply shortage through 2045, as indicated by **Tables 7.3 to 7.9**, severe and extent droughts may cause the WSCP to be enacted. The City will rely on the implementation of the WSCP to augment the City's reduced supply during consecutively dry years. The WSCP supply augmentation benefits during a five-year drought are shown in standard DWR Table 7-5 in **Appendix E**

## 7.9 WATER SUPPLY OPPORTUNITIES

### 7.9.1 City Projects

Other than replacement wells, the City does not have any plans for water supply projects at the current time. However, the City continually reviews practices that will provide its customers with adequate and reliable supplies. As mentioned in **Section 2**, Well No. 15 and 17 are currently inactive. Well No. 15 is scheduled to be brought back online by 2022-2023, whereas the City is planning for treatment alternatives to return well 17 to service. After these wells are returned to service, the City will focus efforts on identifying new water supply projects. This may include additional wells, alternative water supply projects, and the leasing of additional groundwater rights from other agencies to meet demand.

### 7.9.2 Regional Projects (MWD)

On behalf of its member agencies, MWD is implementing water supply programs or strategies for the region to increase water supply reliability in the future. Some of these strategies include:

- Seawater Desalination
- Conservation
- Water Recycling
- Groundwater recovery
- Local Surface Water



- Graywater
- Storage Related to SWP and CRA
- Other (Outside of Region)

MWD is currently updating its Integrated Resource Plan (IRP), which should be released in 2021. The 2020 IRP will be a brand-new IRP that will incorporate different scenarios for the future. The 2020 IRP will be based on long-term, diversified strategies outlined in Gov. Newsom's Water Resilience Portfolio Initiative.

### 7.9.3 Local Projects

Central Basin and the Water Replenishment District (WRD) have recently partnered for several groundwater protection and replenishment programs that help member agencies to maximize groundwater supplies. Central Basin does not directly recharge the Central Groundwater Basin. WRD purchases untreated, imported water from Central Basin and recycled water from LACSD to recharge the Central Basin. As of 2019, WRD's groundwater replenishment is entirely sourced from local recycled water and captured stormwater. WRD initiated the "Win 4 All" program in 2019 to help its member agencies to fully utilize groundwater storage space by replenishing the Central Basin through additional stormwater capture and recycled water

supplies. WRD's goals with the "Win 4 All" program is to help improve groundwater reliability through the development of storage accounts for use in drier years.

WRD is also currently constructing a groundwater extraction and treatment system to reduce concentrations of contaminants within the perchlorate "hot spot" to help prevent any further migration into the CBWCB. This project will be completed by 2022. Additional data will be collected during construction to help in identifying the perchlorate source and yet to be determined responsible party.

Finally, WRD is working with the Los Angeles County Department of Public Works (LACDPW) on several design projects for the Rio Hondo and San Gabriel Coastal Spreading Grounds with the goal of increasing the capture of stormwater for groundwater recharge.

These programs will provide additional groundwater supply reliability for the City since additional groundwater will be recharged in the Central Basin each year. Further, WRD's groundwater contamination remediation and prevention programs will help agencies to more quickly address water quality concerns that affect groundwater supply reliability.

# Section 8

## Contingency Planning

*Diesel-powered generators, such as the one pictured below, can provide a backup supply of water in case of power outages to water wells or booster station pumps.*





## CONTINGENCY PLANNING

*Diesel-powered pumps can provide emergency water supplies during sudden catastrophes.*

### 8.1 INTRODUCTION

In addition to prolonged droughts that can gradually decrease water supplies, water supplies may be interrupted in a number of sudden, catastrophic ways. Sudden catastrophes may include earthquakes, power outages, pumping equipment failures, or spikes in groundwater contaminants that cannot be remedied expeditiously. Water shortages can also be a result of intentional or accidental manmade catastrophes, such as acts of terrorism or chemical spills into nearby canals or groundwater spreading grounds. It is important that the City has a plan in place to manage its water system during short or

long-term water shortages. Long term, water shortages can be addressed through conservation and supply augmentation. Short term, water shortages are best handled through a “Contingency Plan”. A Water Shortage Contingency Plan (WSCP) is a required component of the City’s UWMP, which provides guidance on stages of action to be undertaken by the City in response to water supply shortages. A WSCP is an independent document that is incorporated into the City’s UWMP.

This Section serves as the City’s WSCP. The City’s response to water shortages will be a coordinated effort between its own staff and other local and regional water agencies



**Figure 8.1: Lake Oroville Failure (February 2017)**

During a water shortage emergency, the City will implement this WSCP, which coincides with **Section 6-5 of the City's Municipal Code**. The intent of the plan is to reduce the effect of shortages on the City's customers. In compliance with the Water Code requirements, this plan imposes a 50 percent reduction in the total water supply.

## 8.2 NEED FOR CONTINGENCY PLANS

The recent drought of 2011-2017 significantly depleted the State's supply of water and posed a challenge to many agencies throughout the State. Following the drought, the State experienced a wet

winter in 2017. This resulted in flooding in parts of the State. Several dams overflowed and caused the evacuation of thousands of residents. The most visible example of dam failures was the failure of the Oroville Dam in February of 2017. Structural failure of the Oroville Dam spillway resulted in heavy flooding, damage to farmland, and the evacuation of nearly 200,000 residents. As a result of the crisis, DWR prepared a Lake Oroville Flood Season Operations Plan in order to operate the reservoir during construction of the repairs. The failure of the reservoir highlighted the need for improvements to regional and local contingency plans.



### 8.2.1 Recent State Water Code Amendments

As a result of the recent drought and flooding in the State, the following changes were made to the Water Code in 2018 which affect WSCPs:

- *CWC § 10632 (a)(1)*: WSCPs must include attributes of its Water Supply Reliability Analysis, or reliability of water supplies under five consecutive drought years.
- *CWC § 10632 (a)(3)(A)*: WSCPs must include six (6) Standard Stages, including a shortage of greater than 50 percent of “normal” water supply.
- *CWC § 10632 (a)(4)*: WSCPs must include shortage response actions, and the extent of which the action will address the shortage, based on the severity level of the shortage.
- *CWC § 10632 (a)(2)*: WSCPs must include a plan for preparing annual water supply and demand assessments.
- *CWC § 10632.5 (a)(5)*: WSCPs must include communication protocols to inform customers and the general public of current or predicted water shortages stages.
- *CWC § 10632.5 (a)(9)*: WSCPs must include monitoring and reporting

procedures to assure the agencies’ ability to monitor customer compliance and report data to the State/DWR.

- *CWC § 10632.5 (a)(10)*: WSCPs must include a procedure for evaluation of the WSCP and an outline or procedure to adjust the UWMP in subsequent cycles (i.e. 2025).

The water code changes listed above were added to the Water Code in 2018. In addition, the following measures were taken in recent years that affect WSCPs:

- In 2014, the State Water Resources Control Board (SWRCB) issued Resolution 2014-0038, which aims to enhance customer awareness of their personal water use and establish incentives to reduce demand, such as tiered or drought rate structures.
- In 2015, Gov. Brown issued Executive Order B-29-15, which calls for a temporary reduction in statewide water use by up to 25 percent.

The SWRCB extended Executive Order B-29-15 in February of 2017. In April 2017, the SWRCB rescinded the mandatory conservation requirements of the Order. The action was in response to the ending the drought state of emergency and transitioning to a permanent framework for making water conservation a California way of life.



### 8.3 LEGAL AUTHORITY

As indicated by **Sections 8.1** and **8.2**, the City has the legal obligation to prepare and implement a WSCP during times of drought or sudden supply interruptions. Response to water shortages is also codified into City Municipal Code (**Section 6-5**, Article 4 “Mandatory Water Conservation”). **Section 8.7** and **Table 8.9** of this WSCP include a listing of shortage response actions per CWC § 10632 (a)(3)(A), including the means by which the City will declare a water shortage and authorize response actions. The remaining Sections of this WSCP describe the City’s response actions in greater detail.

### 8.4 WATER SUPPLY RELIABILITY ANALYSIS

The City’s UWMP does not anticipate a water supply shortage due to drought conditions through 2045. The results of the City’s Drought Risk Assessment (DRA) are shown in **Figure 8.2** and **Table 8.1** on the following page. Groundwater supplies are not expected to be affected during droughts lasting up to five (5) years. Likewise, MWD’s 2020 UWMP forecasts that imported water supplies will be available during drought periods. Furthermore, droughts will be mitigated by implementing this WSCP.

Due to the City’s imported water connection to the Central Basin Municipal Water District (Central Basin), the City’s

water system, the City has additional water supplies available in the event of water quality impairments with a particular well. **Figure 8.3** shows a general procedure that the City may take if any wells are detected to have water quality concerns. The City may also construct additional wells over the course of this UWMP planning period (2045), to improve operational flexibility and redundancy. Therefore, the City does not anticipate any significant impacts to water supply reliability due to water quality.

Other events which may create a water shortage condition are discussed in **Section 8.8** of this WSCP. These events may include, but not be limited to:

- Regional Power Outage
- Earthquake
- Terrorism Incident

If any of the above events occur, the City will work in conjunction with Central Basin MWD, the Water Replenishment District (WRD), the City of South Gate, Golden State Water, Walnut Park Mutual Water, and Maywood Mutual Water to address the effects of potential water shortages. **Section 8.8** of this WSCP provides a brief overview of the City’s response actions to these types of emergencies. Regional response actions are also outlined in Regional Planning documents contained in the Appendix of the City’s 2020 UWMP.

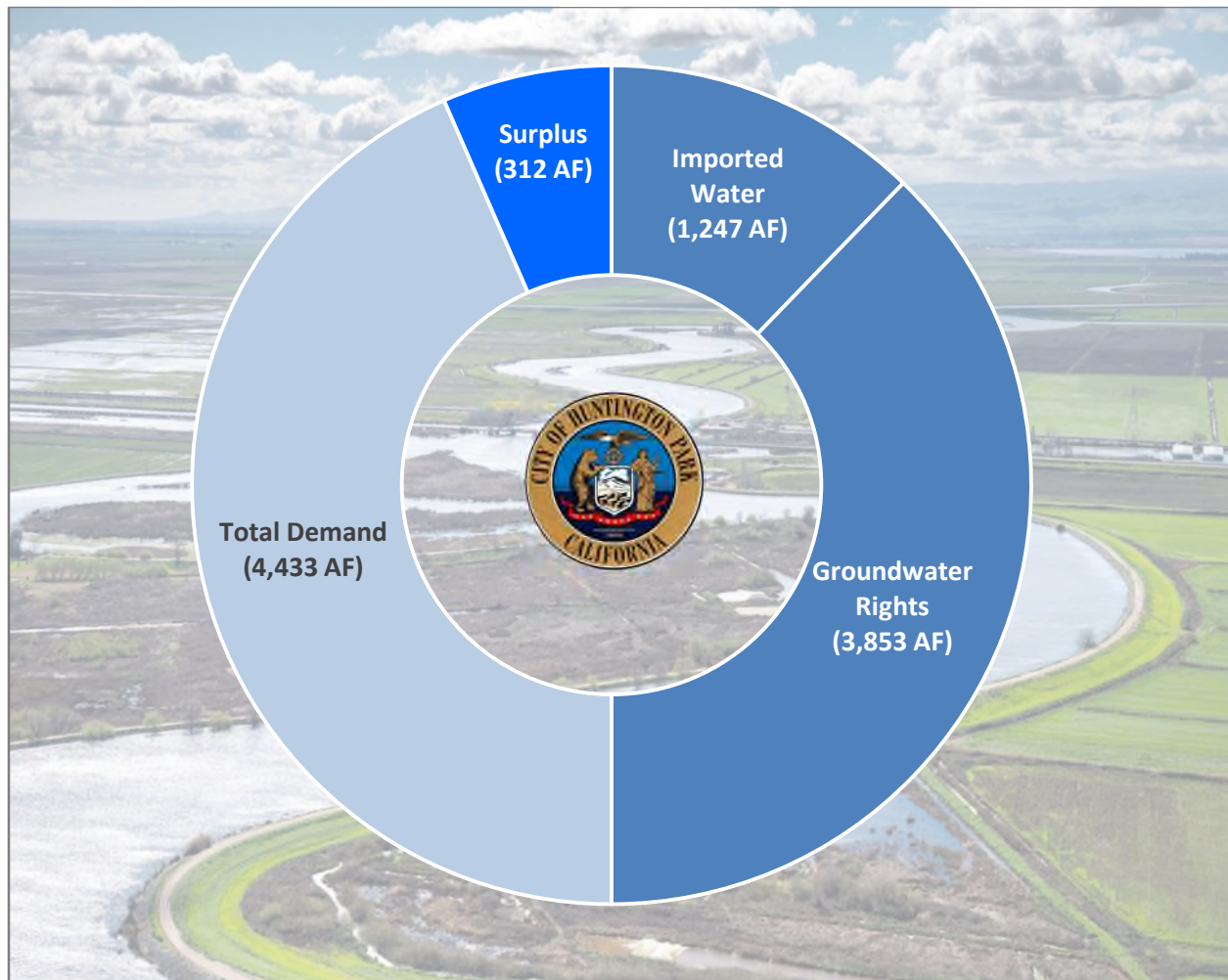
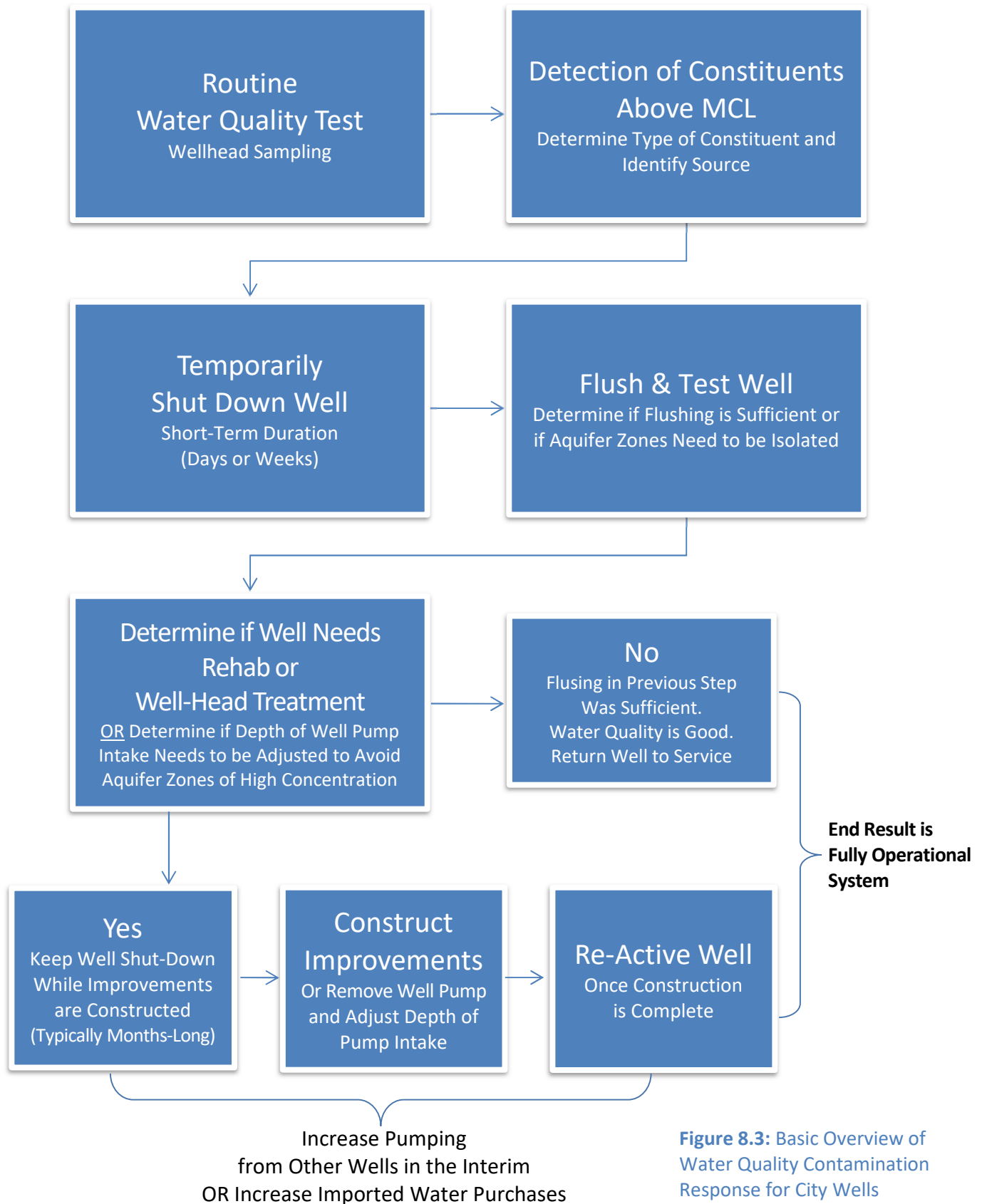


Figure 8.2: Results of Drought Risk Assessment (Next Five Years)

Table 8.1  
Drought Risk Assessment (Next Five Years)

Year	Total Dry-Year Water Use (AF)	Total Dry-Year Supply (AF)	Difference (AF)	WSCP Net Benefit (AF)	Potential Difference (AF)
2021	4,667	5,100	433	0	433
2022	4,788	5,100	312	479	791
2023	4,510	5,100	590	451	1,041
2024	4,499	5,100	601	450	1,051
2025	4,477	5,100	623	448	1,071





## 8.5 ANNUAL ASSESSMENTS

Agencies typically prepare Water Supply Assessments (WSAs) when housing developments are proposed by developers. WSAs provide an estimated of available supplies for a proposed development in order to confirm the ability of the agency to serve water to a particular development. Over the next few decades, the City will experience only mild growth in its water service area. Most of this will be re-development. The City will need to refine its procedure for developing WSAs and for assessing water demands in its service area.

Similar to a development-driven WSA, a system-wide assessment of supplies and demands will be required of all water agencies in the State. According to CWC § 10632 (a)(2), the City will be required to prepare an “Annual Assessment” of supplies and demands, including an Annual Water Shortage Assessment Report, by July 1<sup>st</sup> of each year. At this time, DWR requires that the City include a guideline for preparation of an Annual Assessment in this WSCP.

### 8.5.1 Decision Making Process

The City’s Annual Assessment will be based on metered data from active wells and from customer meters. These figures are available to the City on a monthly basis, or

more frequently if the City desires. The City can also rely on quarterly or annual reports. With AMR technology, the City can adjust to changing conditions (such as rainfall) and can adjust its reporting leading up to the submittal of the Annual Assessments. As of next year (2022), City staff will review water production data and water consumption data starting in January, with the intent to prepare an Annual Water Shortage Assessment Report to the City Council by May each year. The Final Report can then be submitted to DWR by July 1 of each year.

### 8.5.2 Key Data Inputs

The Annual Assessment will be based on the forecasted demands and estimated water supply availability, including any known infrastructure constraints. The Annual Assessment will also consider weather, population growth, and other influencing factors, such as state or local policies that will impact water demands, or regulations affecting water supplies.

The following data are typically available to City staff and can be relied on when preparing the Annual Assessments:

1. Estimated dry-year demand without any conservation measures. Dry-year demands will be determined by adding an increase factor of 5% to normal demands.



2. Estimated total water supply availability under dry-year scenarios. The water supply available will be based on what is available to the City, regardless of pumping capacity. Groundwater supplies can be estimated from annual WRD Basin Reports prepared under the 2014 Sustainable Groundwater Management Act (SGMA) and from local groundwater level monitoring by WRD.
3. Estimated capacity of water production infrastructure. Any known or forecasted issues affecting the City's water production infrastructure can be considered, such as:
  - Mechanical or electrical issues with groundwater well pumps.
  - Possible power outages for operation and maintenance
  - New construction and repairs

The potential constraints on supply capacity listed under Item 3 above are subject to change from year to year. Thus, the City should analyze the condition of Well No. 5 before making a determination on forecasted groundwater supplies. In addition, the City should contact DWR to

determine allocations from the State Water Project (SWP). Likewise, the City can contact West Basin to determine the forecasted supplies from the Colorado River Aqueduct. As noted in **Section 3** of the City's UWMP, both the SWP and the CRA are sources of imported water for the City.

### 8.5.3 Current Forecast

In general, the total available water supply will be based on the capacity of the City's water supply infrastructure of rights, whichever is more restrictive. At this time, the City's combined water supply capacity is roughly 5,100 AFY. This is based on adjudicated groundwater rights and imported connection capacity. Regardless of the available supply, the actual supply will be based on the projected demands. **Table 8.1** provides the projected supply capacity volumes along with the projected water demand (about 4,788 AF in 2022).

Based on **Table 8.1**, the City will have a projected demand of 4,477 AF in 2025, which is about half of the City's current water supply capacity. Although this indicates the City's water supplies will be more than sufficient to meet demands, the City can add an additional groundwater well to provide greater redundancy (i.e. greater resiliency to shortages).



## 8.6 REGIONAL CONTINGENCY PLANS

A significant portion of the City's water supply comes from Central Basin, which receives water from MWD. Thus, the reliability of the City's water supply during a shortage is based partly on the actions of MWD during water shortages. Recently, MWD updated its WSCP to improve preparedness for droughts and other impacts on water supplies by describing the process used to address degrees of water shortages.

### 8.6.1 MWD Contingency Plan

MWD's WSCP is designed to be consistent with the Water Surplus & Drought Management (WSDM) Plan and the Water Supply and Allocation Plan (WSAP). The 2008 WSAP is MWD's policy and formula for equitably allocating available water supplies during extreme water shortages. The 1999 WSDM Plan provides policy guidance for

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*MWD's 2020 WSCP builds on the foundation of the 1999 WSDM Plan and the 2008 WSAP.*

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managing regional water supplies during surplus and shortage conditions. Similar in concept to the WSCP, the WSDM Plan provides an overall vision for operational supply management and characterizes a flexible sequence of actions to minimize the probability of severe shortages and reduce the likelihood of extreme shortages. The

WSDM Plan principles guide the specific actions to be taken under WSCP shortage stages. Data collection, continual analysis, and monthly reporting processes of the WSDM Plan implementation form the basis for MWD's Annual Water Supply and Demand Assessment that will be provided annually to the state beginning in July 2022. Because managing MWD's water supply resources requires timely and accurate information on supply and demand conditions that change throughout the year, MWD evaluates available water supplies and existing water storage levels on a monthly basis to determine the appropriate actions identified in the WSDM Plan. The WSAP is integral to the WSCP's shortage response strategy in the event that MWD determines that supply augmentation (including storage) and demand reduction measures would not be enough to meet a projected shortage.

### 8.6.2 Central Basin Contingency Plan

Central Basin is a member agency of MWD and receives nearly 100% of its (potable) water supply from MWD. As a result, Central Basin operates in conjunction with MWD's water resource management planning documents. MWD's prior WSDM and WSAP plans have been a part of Central Basin's previous UWMPs. Since MWD has recently updated its WSCP to include DWR's standard six (6) shortage stages, Central



Basin is subsequently impacted. As a Central Basin member agency, the policies and actions of Central Basin impact the City's water management policies. Thus, the City's contingency policies are most beneficial if they are aligned with Central Basin's and MWD's contingency policies.

## 8.7 CITY CONTINGENCY PLAN

Since the drought period of the early 1990s, the City has implemented a water conservation program to reduce water use during shortages. The City's conservation plan (or WSCP) was originally adopted as **Section 6-5** of the City's Municipal Code. This WSCP hereby updates the previous Plan to provide the City with the authority and guidance to implement a phased approach depending on the severity of a water shortage. In the event of a water shortage, the City Council will implement the appropriate water conservation phase by resolution.

The objectives of the response plan are to:

1. Prioritize essential uses of water
2. Maximize local municipal water supplies
3. Eliminate water waste city-wide
4. Minimize adverse financial effects

Regarding Objective No. 1, priorities for use of available potable water during shortages

are based partly on California Water Code, Sections 350-358. Water allocations are established for all customers according to the following ranking system:

1. **First Priority:** Minimum health and safety allocations for interior residential needs.
2. **Second Priority:** Commercial, industrial, institutional/governmental operations.
3. **Third Priority:** Existing landscaping.
4. **Fourth Priority:** New customers, proposed projects, etc.

Regarding the 1<sup>st</sup> Priority specified above, as noted in **Section 6** of the City's UWMP, nearly 75% of the City's water service connections consist of residential accounts. As a result, the City can use its population estimates to assess water use needs during a shortage.

### 8.7.1 Health & Safety (1<sup>st</sup> Priority)

In 2018, the State adopted Assembly Bill 1668, which amends Section 10608.20 of the Water Code to stipulate an indoor water use standard of 55 gallons per capita per day. However, this standard is subject to adjustment. Thus, the City is obligated to determine the minimum health and safety water needs for its residents. To assess the minimum amount of water that should be available (1<sup>st</sup> Priority Level), the amount of



personal hygiene household water use must be quantified. Based on common indoor residential water use in the United States, health and safety water use is estimated to be as shown in **Table 8.2** below:

**Table 8.2**  
**Water Fixtures: Health & Safety**  
**Personal Use (gal/day)**

Item	Regular	Voluntary Conservation
Toilet	14	10.5
Shower	15	12
Washer	12	11
Kitchen	4	3
Other	4	4
<b>Total</b>	<b>49 gal</b>	<b>40.5 gal</b>

Since the City has a population of about 57,000 residents, at a rate of 40 GPCD, the City will need up to **2.3 MG per day** to provide for the health and safety of its residents (if conservation is voluntary). Since the City's reservoirs have a combined capacity of about **14 MG**, the City can provide for about **six (6) days of water supply** to its residents. However, the ability to meet the needs of its residents during a severe shortage may prove to be difficult unless the City's citizens are aware of the water supply shortage. Thus, public outreach must be a top priority for the City during a water shortage.

### 8.7.2 Stages of Action

The City's Annual Assessments prepared under **Section 8.5** can be used to predict shortages. The City's WSCP imposes six (6) stages of response actions based on the severity of the City's water supply shortage. The stages are based on DWR's established criteria as shown in **Table 8.3** below:

**Table 8.3**  
**Water Shortage Stages & Reduction Targets**

Shortage Stage	Restriction Type	Water Supply Reduction Target
I	Mandatory	10%
II	Mandatory	20%
III	Mandatory	30%
IV	Mandatory	40%
V	Mandatory	50%
VI	Mandatory	>50%

To lessen confusion on City customers, the first four stages (Stages 1 to 4) regulate customer responses to shortages, while the latter two stages (Stages 5 to 6) regulate City water staff response efforts.

The City of Huntington Park's City Council will formally declare the stage of the water shortage, following a public hearing, upon determination from City water staff that a water shortage exists and the WSCP should be implemented. Following Council



declaration of a shortage stage, the WSCP will become effective no sooner than the first billing period on or after the date of publication of the Council Resolution.



Figure 8.4: City Council Can Declare Shortage Stages

The WSCP will remain in effect until the City Council declares the water shortage emergency has ended. Alternatively, the City Council may also change the stage of the water shortage as appropriate; however, the City Council will not impose mandatory measures without first conducting a duly-noticed public hearing pursuant to CWC § 350 or § 375.

### 8.7.3 Communication Protocols

A common understanding on the water supply situation is essential for the WSCP to be effective. During a water shortage, the City will be able to allocate staffing and resources to inform its customers of the Council-declared water shortage. In particular, the City will inform its water service customers of the following:

- Water Shortage Stage
- Water Use Prohibitions
- City Water Staff Response Actions

The communication protocol will be in place prior to formal declaration of a water supply shortage. The frequency and extent of coordination will be based on the severity of the shortage to ensure effectiveness of a declared water shortage. The City will use the following resources to communicate with its customers:

- City Website
- Social Media (i.e. Twitter/Facebook)
- Bill Inserts/Postcard Notices
- Billboard or Digital Message Boards
- Advertisements (Radio & Print)

The goal of the communication efforts will be to raise awareness of the drought and to motivate the City's water service customers to conserve water. The City should also prepare customers for possible increases in water shortage severity. Finally, as mentioned under Priority 1 in **Section 8.7.1**, the key goal of communication is to promote available water resources for vulnerable populations, provide specialized outreach for impacted industries, including instructions on how to receive emergency bottled water, and how to participate in public hearing meetings with City staff.

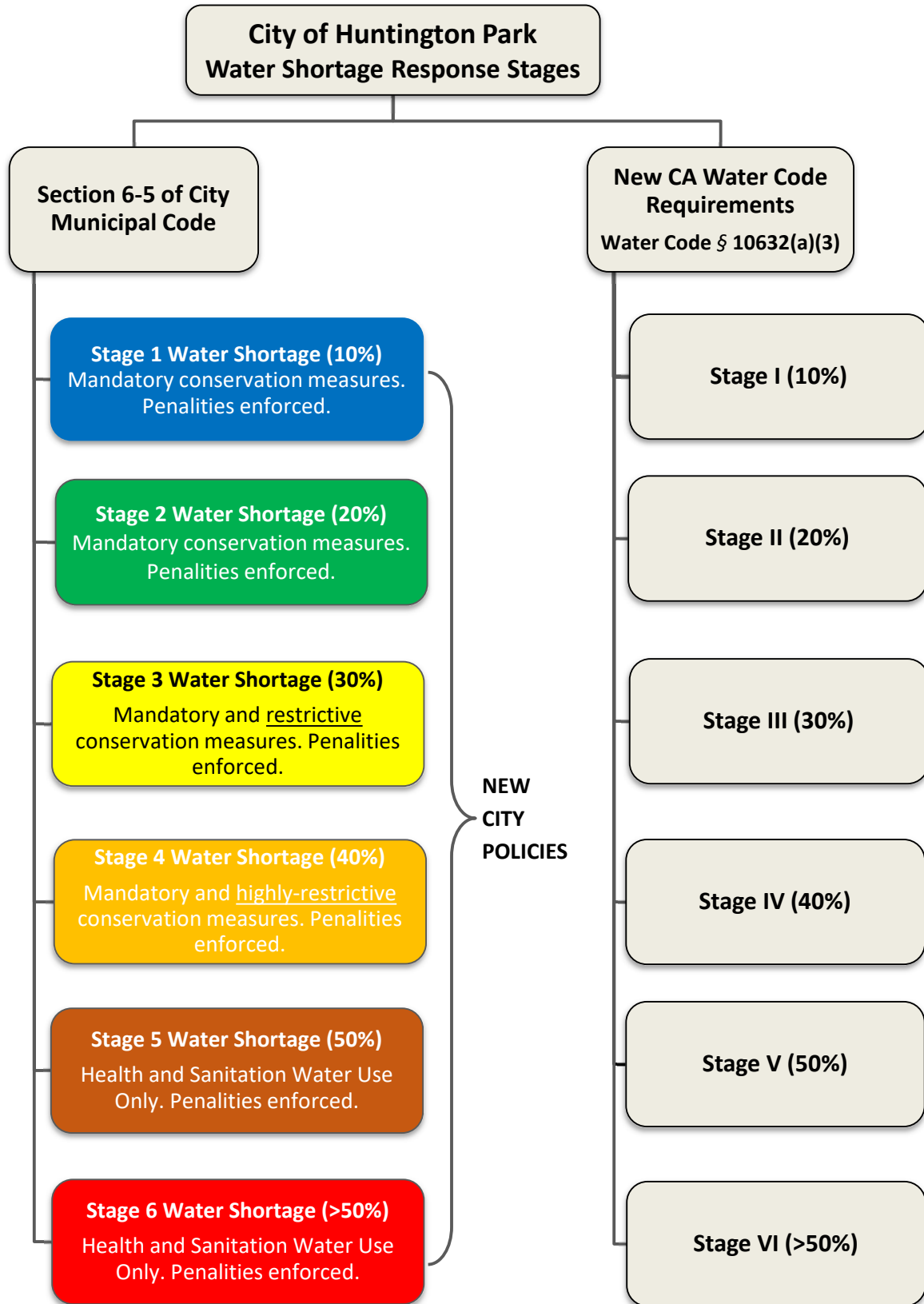


Figure 8.5: City Water Shortage Contingency Plan



#### 8.7.4 Limitations/Prohibitions

Prohibitions on water use, include, but are not limited to, the following:

1. Allowing irrigation runoff
2. Landscape irrigation for more than 15 minutes (except drip irrigation)
3. Irrigation on rainy days or within specified hours of a rain event.
4. Allowing leaks from customer plumbing
5. Washing of automobiles without a bucket or hand-held hose equipped with a positive shutoff nozzle
6. Restaurants serving water to their customers, except when specifically requested by their customers
7. Operating a decorative water fountain without re-circulated water
8. Operating a commercial car wash without re-circulated water
9. Operating a single-pass cooling system
10. Hotels, motels and other commercial lodging establishments shall not launder towels and linens daily, except when specifically requested by their customer.

Additional prohibitions may also be enforced, depending on the declared stage shown in **Table 8.3**. Moreover, the prohibitions listed above may also be adjusted depending on the severity of the declared stage. For instance, irrigation may be entirely prohibited under Stage 3 or 4, until the shortage is rescinded by Council.

#### 8.7.5 Penalties for Non-Compliance

Per City Code 6-5.410 “Failure to Comply”, the penalties for non-compliance of the City’s Water Shortage Contingency Plan will be as follows:

- 1) *First Violation. The City shall issue a written notice of the fact of a first violation to the customer.*
- 2) *The first violation after written notice to customer shall result in a One Hundred and no/100ths (\$100.00) Dollars fine for that first issued citation.*
- 3) *Two Hundred and no/100ths (\$200.00) fine for the second citation issued.*
- 4) *Five Hundred and no/100ths (\$500.00) fine for the third and subsequent citations issued.*

The penalties listed above may be waived if a customer completes a written request to a hearing and provides supporting documentation for proof of hardship.



## 8.8 DISASTER MANAGEMENT

During a water shortage, the City has the following tools available to restrict water use to health and safety uses only:

- Expanding public outreach
- More frequent meter readings
- Fines and penalties
- Flow-restriction devices
- Moratorium on service connections

The City's Natural Hazard Mitigation Plan (HMP) in **Appendix N**, adopted in October of 2004, addresses the planned response to extraordinary emergency situations associated with natural disasters, including

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*The City's HMP, RRA, and ERP assist the City in dealing with emergencies.*

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seismic. Other City planning tools, such as the City's Risk and Resiliency Assessment (RR) and Emergency Response Plan (ERP), are currently being updated as part of the America's Water Infrastructure Act of 2018 (AWIA). During an emergency, the most effective and economical allocation of water for the maximum benefit and protection of life and property is the City's top priority. As such, City Administration, Water Department, County Fire Department, and City Police

Department will work in union to help distribute bottled water to residents. If water supplies are affected, the City's water staff shall maintain water operations as follows:

- All on-duty personnel will remain on duty until relieved of duty
- Off-duty personnel will be expected to return to work or be "on-call"
- While in a disaster mode, working shifts will be 12 hours

The City's Water Operations Manager will be responsible for carrying out the following operations:

- Assess impact of incident
- Establish contacts with neighboring water agencies
- Identify need for and prioritize locations for water distribution
- Provide for water quality assurance or prepare notices for water quality
- Evaluate, plan, and implement actions to acquire and distribute alternative water
- Determine the need to staff a water task group and secure resources



- Provide informational status to nearby water agencies, including:
  - Central Basin
  - City of South Gate
  - Tract 349 Mutual Water
  - Walnut Park Mutual Water
  - Maywood Mutual Water
  - Southern California Water
  - Golden State Water
- Provide information to media as appropriate

A general summary of City response actions to catastrophes/disasters is provided in **Table 8.4**. This WSCP provides a general guide of City response actions to catastrophes. Other planning documents, including the City's HMP, provide additional details which supplement this UWMP.

### 8.8.1 Seismic Risk

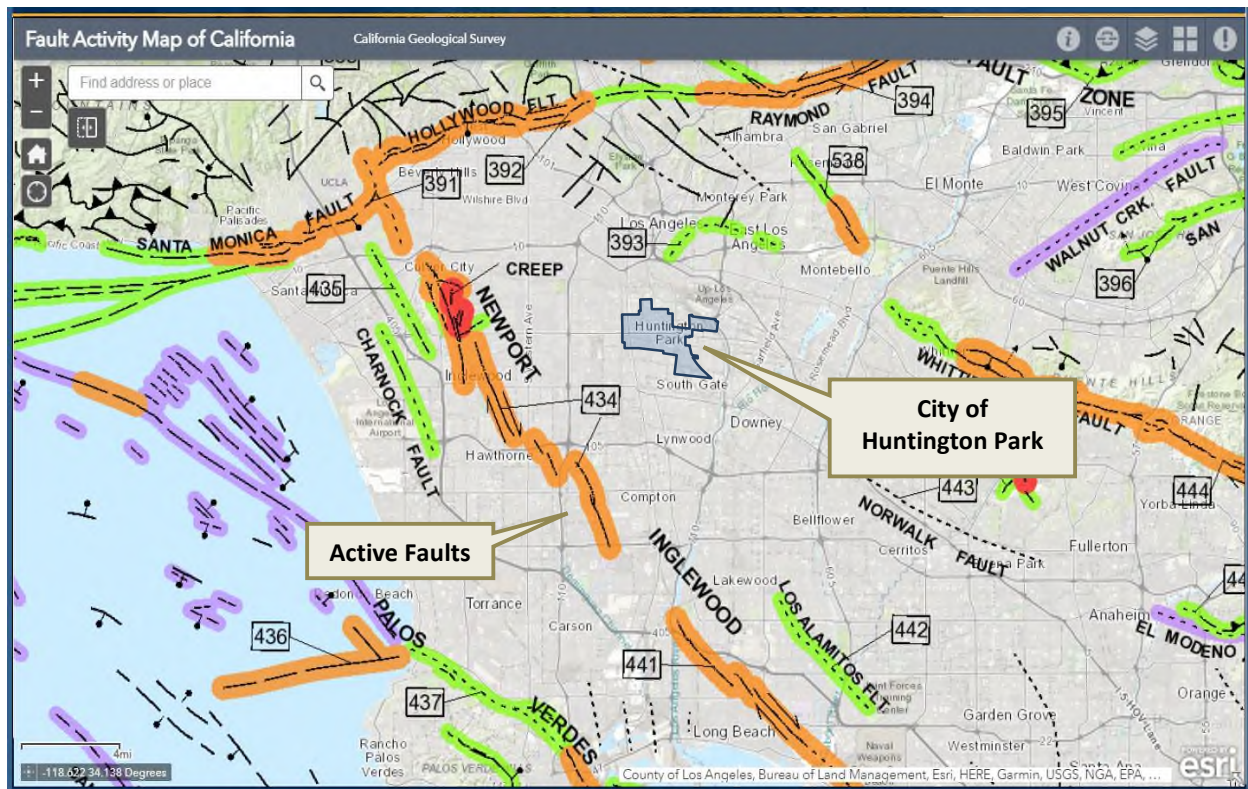
According to the maps provided on the California Office of Emergency Services' online planning tool (My Plan) and the California Geological Survey's online earthquake hazards zone application (EQ Zapp), multiple known faults exist within close proximity to the City. These faults include the Newport-Inglewood Fault, the Whittier Fault, the Hollywood Fault, and the East Montebello Fault. The known fault lines are shown in **Figure 8.6**.

An earthquake has the potential to damage to drinking water and wastewater utilities. Impacts to the City's water system may include, but not be limited to:

- Damage to wells/well houses
- Water tank damage or collapse
- Damage to water distribution system

The City's water production facilities that are vulnerable to earthquake damage are listed in **Table 8.5**. Damage to distribution lines due to shifting ground and soil liquefaction can result in potential water loss, water service interruptions, low pressure, contamination and sinkholes and/or large pools of water throughout the service area. For these reasons, earthquakes can potentially restrict water supplies for a longer period of time than a power outage or man-made catastrophe. In the event that an earthquake damages portions of the City's pumping or distribution system, the City can provide temporary drinking water to customers through potable water trucks as noted in **Section 8.8.2**.

Even if an earthquake does not result in damage to water production or distribution facilities, an earthquake could result in a power outage at the City's pumping facilities. The City's water operations staff will be on standby alert during an emergency to respond promptly to water supply interruptions. The City's water operations



staff will work with Southern California Edison (SCE) to restore power to water supply facilities. In the interim, the City's wells can receive backup power. That is, the City can provide diesel-powered generators so that wells can remain operational until power is restored. The City can also provide portable diesel-powered pumps to extract water from the City's active storage reservoirs listed in **Table 8.6**.

### 8.8.2 Emergency Water Supply

The City's distribution system has seven (7) emergency connections. The emergency interconnections include the City of South Gate, City of Vernon, Tract 349 Mutual

Water Company, Maywood Mutual Water, Walnut Park Mutual Water, and Southern California Water. The connections have capacities of 250 to 400 gpm, with the City of South Gate connection having a capacity of 2,000 pm. These connections allow water to flow in either direction through a flow control valve. In the event that any of these agencies have supply capacity following an earthquake, the City can obtain water from the emergency interconnections until the City's wells are operational.

If an earthquake renders the adjacent agencies unable to provide emergency water to the City, the City can obtain emergency water through portable means



**Table 8.4**  
**Summary of Catastrophe Response Actions**

Type of Catastrophe	City Response
Regional Power Outage	Use back up natural gas and diesel motors at select well and tank sites. Use portable generators available from local vendors to operate the most critical water infrastructure. Additionally, the City will notify residents to minimize water usage during the time of the outage. This will be by local radio and door to door notification.
Earthquake	All City wells, pipelines, and tanks are <u>equally vulnerable</u> to earthquakes. Wells that remain serviceable will be utilized. Use back up natural gas and diesel motors at select well and tank sites. Use portable generators available from local vendors to operate the most critical water infrastructure. Additionally, the City will notify residents to use water only for drinking or sanitation purposed only. If necessary, bottled water will be trucked into the City for drinking purposes. Large-tank water trucks are also available from agencies nearby the City.
Terrorism Incident	In the event that a water source (well) or an area of the water distribution system has been compromised due to terrorism, water personnel will isolate the risk from the water customers and make use of alternate production facilities as available.

**Table 8.5**  
**System Facility Summary – Pump Capacity**

Location (Water Yard)	Well	Well Capacity (GPM)	Booster Pump
Santa Ana	12	1,400	12
Randolph	14	1,300	14
Cottage	15	1,300	11 & 15
Bissell	18	1,800	Bear Booster Pumps
Slauson	17	2,185	1, 2, 3, 4, & 5
Bear	Bissell Well	N/A	8, 9, & 10
Salt Lake	16	1,225	6 & 7
<b>Total</b>	<b>6</b>	<b>9,210</b>	<b>14</b>

**Table 8.6**  
**System Facility Summary – Active Storage**

Location (Water Yard)	Type	Quantity	Capacity
Santa Ana	Ground Concrete	1	396,000
Bear	Ground Concrete	1	3.0 MG
Randolph	Ground Concrete	1	396,000
Cottage	Elevated Steel & Ground Steel	2	1.6 MG
Salt Lake	Ground Steel	1	1.5 MG
<b>Total</b>		<b>6</b>	<b>6.90 MG</b>

*Note: **Table 8.6** includes only active storage tanks. Offline storage tanks can provide an additional 7 MG of storage.*



This would involve vehicles equipped with potable water tanks. The City would have to obtain potable water trucks from nearby suppliers.



Figure 8.7: Potable Water Truck

The Los Angeles County Department of Public Health maintains a list of Licensed Water Haulers:

[http://www.publichealth.lacounty.gov/eh/docs/ep\\_dw\\_licensed\\_water\\_haulers.pdf](http://www.publichealth.lacounty.gov/eh/docs/ep_dw_licensed_water_haulers.pdf)

Based on the list, the closest supplier of potable water tanks and trucks is Universal Bobcat & Hauling, Inc.® of Santa Ana, located about 28 miles from the City. In Los Angeles County, there are two water truck haulers, including RMR Water Trucks® of Castaic and Lunde Water® of Acton, both of which are located over 50 miles away from the City.

The City can also consider purchasing large tanks (500 gallons or more), and securing them to the back of City trucks. This will allow the City to distribute water to customers during an emergency.

### 8.8.3 Assistance During Disasters

Central Basin and MWD are available to assist the City to facilitate the flow of information and provide emergency supplies. MWD has established an Emergency Operations Center (EOC) to assist its staff and its member agencies during a water supply emergency. In 2019, MWD started a new five-year emergency exercise plan that will allow all of its member agencies to participate in at least one of MWD's annual emergency exercises. MWD has conducted over 100 exercises since February 2018. MWD's EOC also conducts monthly communication tests, which include MWD's emergency two-way radio system, on-line WebEOC system, Met-Alert mass notification system, and satellite phones. These monthly tests reach out to the member agencies, Treatment Plant Control Centers, ICPs, MWD management, and the Department of Water Resources. These regular exercises help prepare MWD and its member agencies to respond to future emergencies.

In the event of an MWD supply shortage, the City will benefit from MWD's plans to utilize the Diamond Valley Lake reservoir, which can provide six months of emergency supply. If there were a catastrophic failure of the California Aqueduct or the CRA conveyance facilities, MWD could draw on emergency supplies in Diamond Valley Lake.



**Figure 8.8: Diamond Valley Lake**

The City will be informed indirectly during a catastrophic event that affects MWD's water supplies. Locally, Central Basin, as the MWD member agency, will utilize the Met-Alert system to immediately contact its customer agencies about potential interruption of services.

Additional emergency services in the State of California include the Master Mutual Aid Agreement and the California Water Agency Response Network (CalWARN). The Master Mutual Aid Agreement includes all public agencies that have signed the agreement and is planned out of the California Office of Emergency Services. CalWARN includes all public agencies that have signed the agreement to WARN and provides mutual

aid assistance. It is managed by a State Steering Committee and Regional Chairs.

## **8.9 WSCP ENFORCEMENT & EVALUATION**

To properly assess the effectiveness of this WSCP, the City will need to monitor metered consumption and production. The City will also need to track its billing system to see if fines for violations of water-use prohibitions have been issued.

### **8.9.1 Monitoring**

Using the City's water billing records, the City will be able to identify not only the conserved volumes, but also the customers which are in violation of the provisions of



this chapter. In particular, the City can review data from the following sources:

- **Production Meters:** Provides an account of daily water production
- **Customer Meters:** Provides an account of monthly consumption

The City can also monitor meters for irrigation violations during a water waste patrol. If meters are of the AMI/AMR type at the time of the water shortage, this will allow the City to view consumption immediately from a patrolling vehicle.

In addition to monitoring customer use, the City also has the ability to monitor production volumes to determine if the well supplies have been reduced. Under normal conditions, potable water production is recorded daily. Weekly and monthly reports are prepared and monitored. This data will be used as a baseline to measure the effectiveness of a water shortage stage that may be implemented.

During rationing conditions, the water budget will be monitored on a weekly, daily, or hourly basis depending on the severity of the drought. The City's monitoring system will warn of any critical conditions instantly. In addition, meter readings will be performed more frequently than the normal bi-monthly schedule.

### 8.9.2 Enforcement

During shortage conditions, the City can implement water-waste patrols, or increase the frequency of existing water waste patrols. If City staff are unable to conduct additional water waste patrols, the City can contract with outside support to conduct water waste patrols. However, contracting with an outside firm would incur additional costs at a time when revenue is impacted. If violations are observed, fines/penalties per **Section 8.7.5** can be applied.

### 8.9.3 Reporting

During a declared water shortage, City water staff will report water production and consumption figures to City Council on a monthly basis. Pending regulations from the SWRCB will also require the City to report data to SWRCB on a monthly basis. Thus, during a declared shortage of the WSCP, City staff will report water production and consumption figures to both City Council and the SWRCB on a monthly basis.

## 8.10 FISCAL IMPACTS

### 8.10.1 Impacts to Revenue

During a water shortage, revenue generated through water sales will be impacted. Based on the City's total water revenue and operating expenses, demand reductions will likely result in negative net



cash provided by operating activities. **Table 8.7** below lists the current residential water rates, which are the greatest source of income for the City's water system:

**Table 8.7**  
**Current Residential Water Rates**

Account	Price per HCF
Tier 1 (0–10 HCF)	\$4.70

Based on the rates above, a 50% decrease in residential use (about 1,450 AF or 327,000 HCF) would result in:

- **\$247,000** in lost revenue per month
- **\$3 million** annual lost revenue

Fiscal impacts can be mitigated by considering changes to the City's water rate fee structure. For instance, a fixed base rate could replace the current rate of \$4.70 per HCF. The base rate would cover a fixed volume of water and would allow the City to not be impacted by revenue losses during water shortages.

In addition, the following actions could take place under such circumstances:

- Implement a conservation surcharge
- Delay capital improvement projects
- Consider temporary increase of water rates to meet operation and maintenance costs.

A combination of the measures outlined above may be used to offset or diminish the effects of lost revenues. Capital construction projects may be deferred as appropriate. The base water rate may be increased to cover the general operation, maintenance, system upgrades, and capital expenditures. An increase in the base rate would be temporarily employed and then returned to pre-shortage rates when conditions improve.

### 8.10.2 Impacts to Reserve Funds

The City carries reserves in the water system accounts, to fund for needed improvements to its water system. The balance of reserves the City is maintained primarily for facility repair and replacement. Under a shortage crisis, some flexibility would exist to dip into these reserves to help offset loss of revenue.

## 8.11 THREE-YEAR MINIMUM SUPPLY

During a three-year drought, the City may import water to meet demands in excess of its adjudicated pumping right of 3,853 AFY as necessary. However, unlike groundwater, imported supplies are subject to shortages. Nevertheless, Central Basin projects full supply reliability through the year 2045 for all climatic conditions. Thus, the City anticipates full reliability for all climatic conditions for the near future. **Table 8.8**



below displays the minimum water supply available to the City over the next 3 years:

**Table 8.8**  
**Three-Year Minimum Supply (AF)**

Year	Import (AF)	Wells (AF)	Total Supply (AF)
2021	1,007	3,853	<b>4,860</b>
Demand			2,288
Difference			<b>360</b>
2022	1,007	3,853	<b>4,860</b>
Demand			2,345
Difference			<b>803</b>
2023	1,007	3,853	<b>4,860</b>
Demand			2,206
Difference			<b>942</b>

Based on the above analysis, the City should expect that supplies will be sufficient to meet demands over the next three years. It is important to note that the 3-year minimum supplies shown in **Table 8.8** above are worst-case drought scenarios. This does not take into consideration catastrophic interruptions of supply. Such catastrophic scenarios may limit supplies even more than those shown in **Table 8.8**.

## **8.12 WSCP ADOPTION AND REFINEMENT**

### **8.12.1 Council Resolution**

On June 1, 2021, following a public hearing, the City Council adopted a Resolution No. 2021-13 (included in **Appendix B**) approving

this WSCP. The City intends to update Section 6-5 of the City's municipal code in the following months to coincide with this WSCP. **Tables 8.9 & 8.10** on the following pages provide a summary of the customer prohibitions and City water staff response actions to the water shortage stages listed in **Table 8.3** on Page 8-11.

### **8.12.2 WSCP Refinement Procedures**

The City intends to update and refine this WSCP as necessary. The WSCP can be updated in one of the following ways:

- Cyclical Updates
- Data-Driven Updates
- Externally-Driven Updates

The following is a guideline for how the City will update this WSCP:

#### ***Cyclical Updates***

The cyclical updates will be handled by City staff internally with the assistance of an outside engineering consultant. Once the WSCP is implemented, the City will document the effectiveness of the customer water use prohibitions listed in **Tables 8.9** and the City water staff response actions listed in **Table 8.10**. The effectiveness will be evaluated using the methodologies described in **Section 8.9**. The WSCP effectiveness will be documented



over the course of five (5) years, until the next UWMP update. It is the City's intent to update the WSCP every 5 years, alongside the City's UWMP. The City will conduct an internal review of the WSCP prior to releasing a Request for Proposals (RFP) for the UWMP and WSCP. The RFP process will provide the City with an opportunity to revise the WSCP as-needed.

### ***Data-Driven Updates***

Data-driven updates to the WSCP will likely occur mid-cycle or at some point between the 5-year cycle. The data-driven updates can be prepared entirely by City staff (internally) due to the urgency of such updates. For example, if the City finds that the fines/penalties covered under **Section 8.7.5** are not effective at reducing overall demand, the City may increase the fines through an amendment to Section 6-5 of the City Municipal Code, and revise **Section**

**8.7.5** (Code Section 6-5) to reflect the new fines. Other items of this WSCP can be updated in a similar manner.

### ***Externally-Driven Updates***

Conversely, if the fines are found by the City's customers to be too punitive, and Council is petitioned to reduce the fines, the City can adjust Section 6-5 of the City Municipal Code, and revise **Section 8.7.5** herein to reflect the new fines. Other items of this WSCP can be updated in like manner.

### **8.12.3 WSCP Re-Adoption**

Once the WSCP is revised, the City Council will be required to re-adopt the revised WSCP. This will require a public hearing to receive public comments on the WSCP. The revised WSCP will replace the former WSCP, and will then remain effective until the City elects to update the WSCP.



**Table 8.9**  
**City Code Prohibitions on Water Use During Water Shortages**

Stage	Prohibition/Restriction	Penalty
<b>Stage 1</b> (≤10%)	<ul style="list-style-type: none"><li>• No Irrigation between 10 am to 8 pm</li><li>• No Person Shall Operate a Decorative Water Feature (Fountains, Ponds, etc.) that Does Not have a Recirculating System</li><li>• All Landscape Irrigation Limited to No More than Three (3) Days per Week from June 1 to Oct 31 and No More than Once per Week from Nov 1 to May 31</li><li>• All Landscape Irrigation Limited to No More than 15 minutes per Station per Watering Day</li><li>• Repair or Isolate Leaks within 72 Hours of Notification by the City</li><li>• No Washing Sidewalks and Driveways with Water</li><li>• Car Washing Only with Bucket or a Hose with Shutoff Valve or Nozzle</li><li>• Excess Irrigation Runoff is Prohibited</li><li>• No Landscape Irrigation During or Within 48 hours of a Rain Event</li><li>• Restaurants to Serve Water Only Upon Request</li><li>• Restaurants to Wash Kitchen and Dining Room with Bucket or Specialized Water Broom Only</li><li>• Hotels/Motels to Provide Customer Option of Daily Laundry</li><li>• Automobile Wash Business Must Use Water Recycling Systems</li></ul>	Yes
<b>Stage 2</b> (10% to 20%)	<ul style="list-style-type: none"><li>• All Landscape Irrigation Limited to No More than Two (2) Days per Week from June 1 to Oct 31 and No More than Once per Week from Nov 1 to May 31</li><li>• All Landscape Irrigation Limited to No More than 10 minutes per Station per Watering Day</li><li>• No Refilling of Ornamental Lakes or Ponds, Except to Sustain Aquatic Life</li><li>• Repair or Isolate Leaks within 48 Hours of Notification by the City</li><li>• Pools or Spas to have a Cover to Prevent Evaporation</li><li>• Cease All Operation of a Decorative Water Features (Fountains, Ponds, etc.)</li><li>• No Landscape Irrigation During or Within 72 hours of a Rain Event</li><li>• Commercial Nurseries shall Use Water Only During the Hours from Midnight to 6 am</li><li>• Commercial Landowners to Allow Tenants the Option of Replacing Lawns &amp; Landscapes</li></ul>	Yes
<b>Stage 3</b> (20% to 30%)	<ul style="list-style-type: none"><li>• All Landscape Irrigation Limited to No More than Once per Week from June 1 to Oct 31 and No Irrigation from Nov 1 to May 31</li><li>• All Landscape Irrigation Limited to No More than 8 minutes per Station per Week</li><li>• Repair or Isolate Leaks within 24 Hours of notification by the City</li><li>• Car Washing Limited to Only Automobile Washes that Use Water Recycling Systems</li><li>• No Landscape Irrigation During or Within 1 Week of a Rain Event</li><li>• Restaurants to Wash Dining Room Once Daily (after Close of Business) and Only with Bucket or Specialized Water Broom</li><li>• Restaurants to Pre-Soak Dishes</li><li>• Restaurants to Install Solenoid Valve for Sinks with Garbage Disposals</li></ul>	Yes



**Table 8.9**  
**City Code Prohibitions on Water Use During Water Shortages**

Stage	Prohibition/Restriction	Penalty
<b>Stage 3</b> (20% to 30%)	<ul style="list-style-type: none"> <li>• No Commercial Window-Washing</li> <li>• Apartment Buildings to Certify Low-Flow Fixtures (Showerheads and Faucets) are Installed prior to Leasing Apartments</li> <li>• Commercial Buildings and Restaurants to Replace/Install Waterless Urinals</li> <li>• Commercial Buildings and Restaurants to Replace/Install Low-Flow Toilets</li> <li>• Hotels/Motels to Wash Laundry Only After Change of Customer</li> </ul>	Yes
<b>Stage 4</b> (30% to 40%)	<ul style="list-style-type: none"> <li>• Cease All Irrigation Except by Reclaimed Water or Except for Crops or Horticulture (Nurseries) or for Fire or Erosion Maintenance</li> <li>• No Refilling of Pools or Spas</li> <li>• Commercial Landscape to be Replaced with CA-Friendly Landscape</li> </ul>	Yes
<b>Stages 5 &amp; 6</b> (50% or more)	<ul style="list-style-type: none"> <li>• N/A (Same Requirements as Stages 1 to 4 Above)</li> <li>• This Stage Involves Only Operational/Management Response Actions</li> </ul>	Yes



**Table 8.10**  
**City Water Department Response Actions During Water Shortages**

Stage	City Water Department Response Action	Additional Info
<b>Stage 1</b> (<10%)	<ul style="list-style-type: none"> <li>• Begin an Enhanced Public Awareness Campaign</li> </ul>	Increased Expense for City Use Financial Reserve Funds
<b>Stage 2</b> (10% to 20%)	<ul style="list-style-type: none"> <li>• No Refilling of Municipal Ornamental Lakes or Ponds, Except as Necessary to Sustain Aquatic Life</li> <li>• Reduced Flushing Frequency</li> <li>• No New Potable Water Service</li> <li>• No New Temporary Meters or Permanent Meters</li> <li>• No Statements of Immediate Ability to Serve or Provide Potable Water Service</li> <li>• (Will Serve Letters, Certificates, Or Letters of Availability)</li> <li>• Suspend Consideration of Annexations to the City's Water Service Area</li> <li>• Establish a Water Allocation for Certain Properties Within the City's Jurisdiction</li> </ul>	Increased Expense for City Use Financial Reserve Funds
<b>Stage 3</b> (20% to 30%)	<ul style="list-style-type: none"> <li>• Increase Groundwater Pumping</li> <li>• Issue Water Quality Notices (if Necessary) in Case Additional Pumping Creates Water Quality Issues</li> <li>• Coordinate with Adjacent Agencies to Prepare for Possible Need of Emergency Water when/if Conditions Worsen</li> <li>• Notify customers immediately of suspected leaks in their plumbing</li> <li>• Repair or Isolate Water Main Leaks within 24 Hours</li> <li>• Provide Letters to Certain Properties for Allocations Established in Stage 2 Informing Reduction of 10% in Allocation of Tiered Rate</li> <li>• Elimination of Specific Municipal Uses such as Hydrant Flushing, Street Cleaning, and Water-Based Recreation</li> </ul>	Increased Expense for City Use Financial Reserve Funds
<b>Stage 4</b> (30% to 40%)	<ul style="list-style-type: none"> <li>• Rate Increase Study to Mitigate Loss of Revenue</li> <li>• Further Increase in Rates for Certain Over-Allocation Properties Issued Warnings/Notices in Stage 3</li> <li>• Increase Frequency of Meter Readings to Once Monthly in Order to Allow Staff and Customers to Track Progress</li> <li>• Implement Water Waste Patrols (Once Monthly)</li> <li>• Coordinate with Adjacent Agencies to Receive Emergency Water via Emergency Interconnections</li> <li>• Deter Flushing of Mains Until Maximum Allowable Time for Quality/Safety</li> <li>• Coordinate with Manufacturers and/or Governing Agencies to Receive Fleet of Potable Water Trucks</li> </ul>	Increased Expense for City Use Financial Reserve Funds Defer Capital Projects



**Table 8.10**  
**City Water Department Response Actions During Water Shortages**

Stage	City Water Department Response Action	Additional Info
<b>Stage 5</b> (40% to 50%)	<ul style="list-style-type: none"> <li>• Systemwide Rate Increase to Achieve Necessary Reduction and to Mitigate Loss of Revenue</li> <li>• Notices on Government Access Channel (TV)</li> <li>• Hand-Post Drought Notices on all Customer Properties (Residential Homes &amp; Commercial Buildings)</li> </ul>	Increased Expense for City Use Financial Reserve Funds Defer Capital Projects
<b>Stage 6</b> (>50%)	<ul style="list-style-type: none"> <li>• Mobilize Potable Water Trucks</li> <li>• Decrease Pressure in Water Mains</li> </ul>	Increased Expense for City Use Financial Reserve Funds Defer Capital Projects

# Section 9

## Conservation Measures

*The City's ordinances, adopted by Council, have strict provisions which encourage the efficient use of water while penalizing wasteful use. The City's water staff are also committed to water use efficiency through the use of management practices and customer assistance programs.*





## CONSERVATION MEASURES

*Conservation measures, including those aimed at leak detection (pictured) are an essential part of the City's policies.*



### 9.1 OVERVIEW

As a result of seasonal droughts and continued housing development, water conservation is important to California's sustainability. To help conserve California's water resources, several public water agencies came together to form the California Urban Water Conservation Council (CUWCC). The CUWCC was officially formed in 1991 when the agencies signed a Memorandum of Understanding (MOU) on urban water conservation. In January 2018, the CUWCC became the California Water Efficiency Partnership (CalWEP). Currently, over 200 water agencies are members of CalWEP. The main focus of CalWEP is to

assist its member agencies with public policy, research, and education tools. Regarding the UWMPs, CalWEP works with DWR in order to help form BMP/DMM policies contained in the UWMPs.

At that time, the MOU established 14 Best Management Practices (BMPs) which are defined roughly as policies, programs, practices, rules, regulations, or ordinances that result in the more efficient use or conservation of water. The BMPs were equivalent to the 14 Demand Management Measures (DMMs) defined in the UWMP Act, until 2015. As of the 2015 UWMPs, the Department of Water Resources (DWR) streamlined the 14 DMMs into six (6)



generalized categories, with an additional seventh (7<sup>th</sup>) optional category. According to the 2020 UWMP Guidebook, DWR has confirmed that the Water Code has not updated the reporting requirements for the DMMs in the 2020 UWMPs.

The City acknowledges that efficient water use is the foundation of its current and future water planning and operations policies. The City implements water conservation through a combination of programs, resources, and policies.

## 9.2 DWR DMMs FOR 2020 UWMPs

The DMMs are intended to reduce long-term urban demands from what they would have been without their implementation. The DMMs are in addition to programs which may be instituted during occasional water supply shortages.

- i. Water Waste Prevention Ordinances
- ii. Metering
- iii. Conservation Pricing
- iv. Public Education & Outreach
- v. Programs to Assess and Manage Distribution System Real Loss
- vi. Water Conservation Program Coordination and Staffing Support

- vii. Other Demand Management Measures that have a significant impact on water use

As with previous UWMPs, agencies that are members of CalWEP can submit the BMP annual reports in lieu of providing a description of each DMM in the agency's UWMP.

## 9.3 CalWEP BMPs

An active member of the CalWEP is one that signs the MOU and implements the water conservation measures stipulated by the CalWEP. According to CalWEP, an agency "implements" a conservation measure by achieving *and* maintaining the level of activity called for in each BMP's definition as described in the MOU. This requires a minimum level of staffing and funding efforts. To document the implementation, an agency is required to submit annual BMP reports to CalWEP that document the implementation of each BMP.



Figure 9.1: CUWCC became CalWEP in January 2018

The City is not currently a member of CalWEP. However, Central Basin is a member of CalWEP and implements many of the BMPs on behalf of its member



agencies, including the City. As a result, the City either directly or indirectly implements all of the measures with good faith effort by achieving and maintaining the staffing, funding, and in general, the priority levels necessary to achieve the level of activity called for in each BMP's definition as described in the MOU.

### 9.3.1 2020 Updates to CalWEP BMPs

The CalWEP BMPs changed significantly for the 2015 UWMPs. The recent change for the 2020 UWMPs revises the order of the CalWEP BMPs as follows:

- **BMP 1:** Utility Operations
  - 1.1. Operations Practices
  - 1.2. Water Loss Control
  - 1.3. Metering w/ Commodity Rates
  - 1.4. Retail Conservation Pricing
- **BMP 2:** Education
  - 2.1 Public Outreach
  - 2.2 School Education Programs
- **BMP 3:** Residential Programs
- **BMP 4:** Landscape Programs
- **BMP 5:** Commercial, Institutional, and Industrial (CII) Programs

The CUWCC/CalWEP BMPs are broad measures aimed at reducing water use either directly (rebates and fixture changes), or indirectly (through utility

management or educational awareness). The first two BMPs (Utility Operations and Education) focus on the actions that water agencies can take to reduce water use. The last three BMPs (Residential, Landscape, and CII Programs) focus on tools, rebates, and plumbing fixtures that agencies can provide for customers. **Figure 9.2** on the next page provides a comparison of the DWR and CalWEP conservation measures.

## 9.4 CITY CONSERVATION MEASURES

As a member of Central Basin, the City of Huntington Park benefits from regional conservation programs offered by Central Basin on behalf of its member agencies. Current Central Basin conservation and water recycling programs are saving billions of gallons of imported water each year. These savings relate directly to additional available water for use within the Central Basin service area, including the City. The City has continued to work with Central Basin towards implementing the DMMs.

The City is unique compared to other, larger cities in the region. Therefore, the City's conservation efforts are tailored to address the characteristics of their specific community. This section presents a description of the DMM activities implemented in coordination with Central Basin and the City, including regional and local programs, which benefit the City.

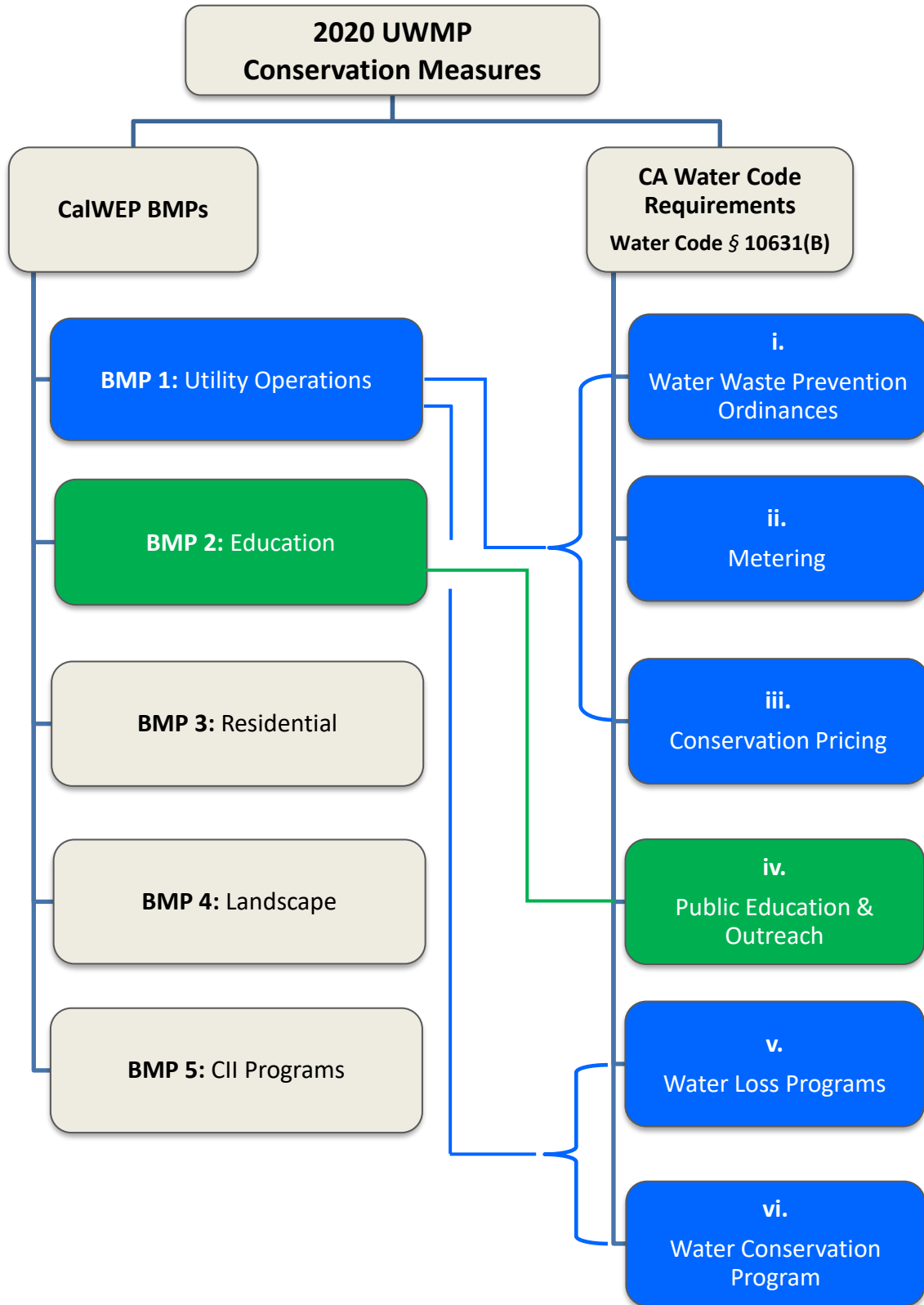


Figure 9.2: Conservation Measures for 2020 UWMPs: CalWEP and DWR Compared



### DMM No. 1 Water Waste Prevention

City Ordinance No. 484 was adopted by the City Council in 1991, prohibiting the waste of water. The ordinance was codified into City Municipal Code (Section 6-5.401). This section of the City's code describes actions that are considered a waste of water. The code enforces the prohibition of water waste under penalty of law (\$100) in accordance with Section 6-5.410 of the City code, if a 2<sup>nd</sup> violation were to occur.



Figure 9.3: Water Waste

Similar to water waste prohibitions, the 1990 Water Conservation in Landscaping Act was passed, requiring local agencies to adopt a model water efficiency landscape ordinance that is at least as effective as the State's model water efficiency landscape ordinance. This requirement was amended in 2006 by Assembly Bill 1881. The City's municipal code Sections 9-3.401 to 9-3.412 meet these requirements.

The City is currently preparing an update to Section 6-5.401 of the City's code to include new prohibitions on water use, depending on drought severity. This pertains to updates to CA Water Code § 10632(a)(3), which was amended by Sente Bill 606 in 2019.

### DMM No. 2: Metering

All of the City's water service connections, for all customer sectors, are metered. The City bills its customers according to meter consumption. In addition, the City encourages the installation of dedicated landscape meters, which allows the City to recommend the appropriate irrigation schedules through future landscape programs. Meter calibration and periodic replacement ensures that customers are paying for all of the water they consume, and therefore encourages conservation. The City will continue to meter all new water service connections.

In recent years, the City has considered plans for a transition to a drive-by Automatic Meter Read (AMR) system that allows the City to more easily monitor each customer account for water conservation. The AMR system readings could also more readily show the functionality of the meters, which allows the City to change out faulty meters in a timelier manner.

Although the current system meets the City's needs, a fix-based AMI system could be helpful for the City during a prolonged water shortage. That is, instead of picking up meter readings manually and then downloading the readings after returning to the office, the City can obtain meter readings from a remote location.



Figure 9.4: AMI-Style Water Meter

The fixed system involves placing antennas throughout the City that would collect data from the water meters at set intervals. The data would then be downloaded to the City's SCADA network and transferred to a server for access by City staff on a desktop computer. The data is computed for individual users for billing purposes or for alerting the City if set water use thresholds have been exceeded. This would signal a possible leak on the property. If this condition arises, the owner of the property would be notified by either email or phone call.

### DMM No. 3: Conservation Pricing

Central Basin currently bills the City under a two-tiered rate structure for imported water. The two-tiered rate structure was last adjusted in January of this year (2021). The Tier rate is \$1,302 per acre-foot (AF) for Tier 2 rate is \$1,344 per AF. The Tier 1 allotment for the City from Central Basin is about 1,400 AF per year. The City is also charged a fixed monthly meter charge of \$11,000 from Central Basin. This recent change by Central Basin will be factored into the City's future water rates. As of this 2020 UWMP, the City has a three-tiered increasing rate structure that applies to all customers for each month, and billed on a bi-monthly basis. The current rate structure was last updated in 2016 and includes the following rates:

**Table 9.1**  
**City of Huntington Park Monthly Water Rates**  
**(Billed Bi-Monthly)**

Tier	Pricing (per HCF)
Tier 1 (0-10 HCF)	\$4.70
Tier 2 (11-20 HCF)	\$5.64
Tier 3 (>21 HCF)	\$6.86

The new rate structure was established as part of the previous water rate study that was approved in 2011. The measure of effectiveness of the rate structure in terms of acting as a catalyst for water



conservation will be assessed based on decreases in the total amount of consumption since the charges are based on total consumption rates.

#### **DMM No. 4: Public Education & Outreach**

Through Central Basin, the City provides educational programs to the general public and to local schools in the City. The City will continue to coordinate with Central Basin to provide water education and outreach programs. Due to budget cuts last year (2020), Central Basin made changes to the programs offered to its member agencies. As of this year (2021), the current programs offered by Central Basin include:

1. Water is Life Student Art Contest
2. Inspection Trips (Tours)
3. Gardening Workshops
4. Demonstration Gardens
5. Caucus Meetings
6. Speaker's Bureaus
7. Community Outreach Booths
8. Bottled Water Donation Program
9. Max the Water Dog Mascot
10. Solar Cup Boat Building Competition

The following is a brief overview of each program:

#### ***Water is Life Student Art Contest***

This art challenge inspires students to learn about limited water resources while

thinking of creative ways to promote the contest theme "Water is Life." The contest is open to 3rd – 12th grade students attending schools located in the Central Basin service area. Fifteen (15) student winners (one grand prize winner and four honorable mentions in each elementary, middle, and high school grade category) will be selected by a panel of judges in April. Each winner will be given a new Apple iPad.

#### ***Inspection Trips (Tours)***

Field trip program that includes a tour of Southern California's water delivery systems. During the tours, community leaders can interact with industry experts to discuss pressing water issues and policies. Tours highlight the massive infrastructure that brings water straight to our homes.

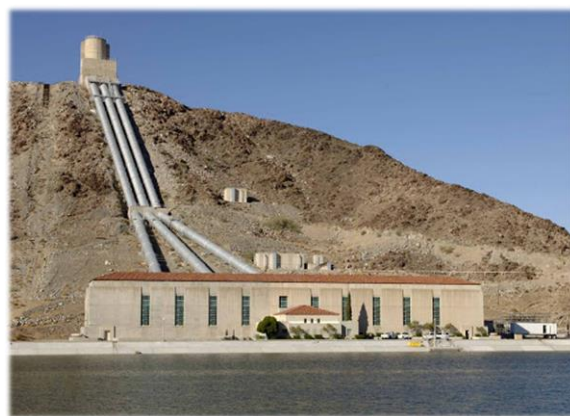


Figure 9.5: Inspection Tour of Colorado River Intake

The inspection trips include: the Colorado River Aqueduct, State Water Project and Diamond Valley Lake. Local tours to Central Basin's facilities are also offered.



### ***Gardening Workshops***

Central Basin, in partnership with LA County and MWD, host free gardening workshops to educate individuals on simple gardening techniques that will conserve water and energy while their garden flourishes. The hands-on workshops are typically between an hour and a half to two hours long.

As of 2020, due to the COVID-19 pandemic, in-person classes are currently postponed until further notice. There are currently four (4) free webinars offered by Central Basin. The free webinars help beautify home and garden. The webinars are approximately 45 minutes followed by a 15-minute period to answer questions and take orders for compost bins. Four subjects are offered including Intro to Composting, Water-wise Gardening, Organic Gardening, and Small-space Gardening.

### ***Demonstration Gardens***

DWR awarded Central Basin with a grant for five (5) demonstration gardens in cities throughout the Central Basin service area. The gardens highlight the state's native plants and serve as a water efficient model for outdoor landscape design. The demonstration gardens were created to motivate community members to use sustainable landscaping. In an average household, the majority of water is consumed outdoors, particularly on grass

lawns. Replacing water-thirsty grass with drought tolerant landscape makes sustainable gardening second nature.

Construction has been completed at the historic Sanchez Adobe in Montebello, South Gate Park in South Gate and Clara Park in Cudahy. Construction is nearly complete at Laurel Station along the Greenway Trail in Whittier and will soon start at El Rancho Verde Park in Cerritos.



**Figure 9.6: South Gate Park Demonstration Garden**

There are no demonstration gardens in the City, but the closest demonstration garden is South Gate Park in the City of South Gate (pictured above in **Figure 9.5**).

### ***Caucus Meetings***

The Central Basin Caucus Meetings are a partnership between Central Basin and Upper San Gabriel Valley MWD (Upper District) that brings between 40 to 50 stakeholders including local, state and federal elected officials to discuss water



issues. These caucuses aim to create networks that will help the agencies of the Central Groundwater Basin better represent their stakeholders.

### ***Speakers Bureaus***

Through this program, Central Basin assigns an industry expert to speak on a number of topics related to the water industry and water conservation. Member agencies of Central Basin can request a speaker to come and speak on a set day and time.

### ***Community Outreach Booths***

Upon request, Central can assign a booth with Central Basin staff to attend community events and present information on water conservation.

### ***Bottled Water Donation Program***

Upon request, Central can provide pallets of water bottles for community events and provide hand-out information on water conservation.

### ***Max the Water Dog Mascot***

Upon request, Central can assign Central Basin staff to attend community events as “Max the Water Dog” mascot and provide hand-out information on water conservation.

### ***Solar Cup Boat Building Competition***

Program where high school students will learn skills by working as a team and selecting from a menu of activities that cover a wide range of STEAM fields including robotics, solar power vehicles, utilizing CAD software, building online gaming, social media messaging, visual arts and dream job skills. As of 2021, this program will include a virtual element. At the end of the Solar Cup 2021 program, teams will virtually race the solar vehicle kits they built during the program. program is funded by MWD and its member agencies including Central Basin.

### **DMM No. 5: Programs to Assess and Manage Distribution System Real Loss**

The City’s surveillance of its water system to detect leaks is an on-going operation. The City recognizes the urgency of repairing leaks and responds to any leak in an expedient manner. Field employees are trained in detection of leaks and signs of unauthorized uses of water. In addition, the customer billing system flags high or unusual water bills, which are then investigated for possible leaks in customer piping. When a leak is first noticed, the pipeline is inspected and promptly repaired.

Likewise, the full water system audit is performed by tracking the total Citywide



metered water use, which can be compared to total well production and total imported water metered at the City's connection to Central Basin. Well production meters and imported purchases are tracked monthly and reviewed annually to determine if the system exhibits significant losses. The City has prepared annual water audits since the 2015 UWMP. The audits were prepared in accordance with CWC Section 10631(d)(3)(B), using methods and a worksheet developed by the American Water Works Association (AWWA). The AWWA audit worksheets require a detailed approach to separate apparent water losses from overall water loss totals to reveal the actual "Real Losses" as well as the "Non-Revenue Water". The AWWA audit defines the following:

- **Water Losses:** Water supplied minus authorized (metered) consumption.
- **Apparent Losses:** Unauthorized or unmetered consumption and inaccuracies or errors.
- **Real Losses:** Water losses minus apparent losses. The actual volume of water lost through leaks, breaks, etc.
- **Non-Revenue Water:** Real water losses plus apparent losses plus unbilled metered and unbilled unmetered consumption

Based on the results of the 2016-2020 water audits, copies of which are included in **Appendix G**, the City's water system losses were as follows:

**Table 9.2**  
**Distribution System Losses (AF)**

Year	Loss (AF)	Percent of Total
2015	250	5.5%
2016	212	5.1%
2017	158	3.9%
2018	158	4.0%
2019	283	6.8%

The results of the last few audits indicate that the City has made improvements on testing, repairs, and record keeping. In addition, the City has recently replaced older, leaky water mains.

#### **DMM No. 6: Water Conservation Program Coordination and Staffing Support**

The City's Water Department Staff collectively serve as the City's Conservation Coordinator. The role of the Water Department entails consistent water code enforcement, and as a result, regular communication with customers is provided. Since 1992, the responsibilities of the Field Operations Manager have included the conservation coordinator duties. The associated costs are approximately \$75,000 per year.



Additionally, Central Basin has assigned a Conservation Coordinator to work with its member agencies, including the City, to enhance their conservation efforts. Central Basin's Conservation Coordinator also investigates Federal, State, and local funding to develop new programs throughout its service area.

### **DMM No. 7: Other Measures**

In addition to the Conservation Measures listed above, the City also maintains the following conservation programs:

#### ***Residential Surveys***

On behalf of its member agencies, Central Basin acts as the liaison to MWD to offer funding to its member agencies for residential survey devices. As a member agency of Central Basin, the City may receive funding through MWD. The City also responds to customer inquiries to high water bills that prompt informal water surveys to be completed by trained City water staff. A high-water bill triggers the City to inspect the accuracy of the water meter, conduct a flow test, and then suggest possible sources of water leaks or excessive water use.

Home surveys result in an average of 21 gallons per day (gpd) per household (about 4 to 5 gallons per person) total savings for

future projections. This rate allows for the calculation of estimated total water savings that result from completion of residential water surveys. For the City, 21 gallons per household provides significant returns as the City is one of the most water efficient cities of Central Basin.



**Figure 9.7: Residential Water Survey**

The City will measure the effectiveness of water survey programs through analyzing the number of surveys distributed and the difference in water consumption for the families after the surveys are conducted.

#### ***Save Our Water Campaign***

The "Save Our Water" campaign, formerly known as the "California Water Awareness Campaign", is an association formed to coordinate efforts throughout the state during Water Awareness Month and throughout the year. An increase in participation and distribution of materials will indicate heightened public water



conservation awareness and may correlate with decrease water demand.

### ***Rebates & Incentives***

In addition, Central Basin collaborates with MWD on its SoCal Water\$mart program, which is a rebate program for residential and commercial properties. The rebates offered for residential customers include:

- High-Efficiency Clothes Washer
- Premium High-Efficiency Toilet
- Weather-Based Irrigation Controllers
- Soil Moisture Sensor System
- Rotating Sprinkler Nozzle
- Rain Barrels & Cisterns
- Turf Removal

Central Basin also offers rebates to commercial customers, through its member agencies. The rebates include:

- High-Efficiency Toilets
- Waterless Urinals
- Flow-Control Valves
- Food Steamers
- Ice Machines
- Laminar Flow Restrictors

In addition to the DMMs described above, the City posts water conservation tips and other information on its website. The City also provides additional conservation information and answers questions from its

customers upon request. The City has developed a hotline for customer use in reporting leaks, overwatering, and other misuse of water.

## **9.5 OTHER LOCAL CONSERVATION MEASURES**

Other local programs may be available through MWD, the Water Replenishment District (WRD), or West Basin MWD. These programs may be helpful to the City to inquire about and implement into its conservation programs in upcoming years.

### **9.5.1 West Basin, WRD, & MWD Programs**

#### ***Water Bottle Filling Station***

As of 2020, this is a new West Basin program that helps provide local students with access to safe and reliable tap water to refill personal, reusable bottles. West Basin grants are available – up to \$2,000 per applicant – for the purchase of an indoor or outdoor filling station at public schools within our service area.

#### ***Water Industry Careers Guest Panel***

As of 2019, this is a new program hosted by West Basin and the Water Replenishment District (WRD), is designed to encourage students in 6th grade through community college to explore career options in the water industry. Since 2020, this guest panel



is being offered virtually as an alternative in-lieu of an in-person guest panel.

### ***Teach and Test Program***

This program allows high school students to volunteer to monitor water quality in the Santa Monica Bay by collecting and processing water samples. During the program, students collect, prepare and analyze water samples at 21 coastal locations. Then they are tested for bacteria levels. The results are published to an online database. At the end of the year, school teams are required to conduct a final presentation that connects the project findings to other environmentally sustainable efforts around the Santa Monica Bay. This program is currently on hiatus for the 2020-2021 school year.

### ***Drop in the Bucket Program***

Offered in partnership with The Wildwoods Foundation, this a free program for 3rd-8th grade teachers in the West Basin service area! A program instructor joins the

classroom, where students will participate in lessons exploring Southern California's water resources and learn about practical water conservation methods. As of 2020, this tour is offered virtually as an alternative to in-person tours, upon request

## **9.6 CONTINUED IMPLEMENTATION**

As described in Chapter 6 herein, the City's per capita water use in 2020 was **66 GPCD**, which demonstrates that the **City has met its 2020 urban water use target (SBx7-7)**. Although the City has met its target year water use, the City plans to continue its conservation efforts described herein. The City will continue to track all program activities. Program effectiveness and per capita water use will be monitored through the billing system. For example, the City can measure impacts of infrastructure, repairs and replacements, including leaky mains, by comparing water apparent water losses from the previous month. For this reason, the City will continue to develop its metering and billing system as a tool to measure effectiveness of all DMMs.



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# APPENDICES A – O





## **Appendix A: Council Resolution Adopting 2020 UWMP**

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**City of Huntington Park 2020 Urban Water Management Plan**

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**WHEREAS**, the California Legislature enacted Assembly Bill 797 (Water Code Section 10610 et seq.), known as the Urban Water Management Planning Act, during the 1983-1984 Regular Session, and as amended subsequently, which mandates that every supplier providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually, prepare an Urban Water Management Plan (UWMP), the primary objective of which is to plan for the conservation and efficient use of water; and; and

**WHEREAS**, the UWMP shall be periodically reviewed at least once every five years, and that the City shall make any amendments or changes to its plan which are indicated by the review; and

**WHEREAS**, the City has therefore, prepared and circulated for public review a draft UWMP, and a properly noticed public hearing regarding said UWMP was held by the City Council on June 1, 2021; and

NOW THEREFORE BE IT RESOLVED, BY THE CITY COUNCIL OF THE  
CITY OF HUNTINGTON PARK AS FOLLOWS:

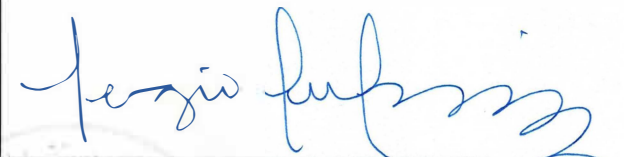
**SECTION 2.** The City is in conformance with all applicable requirements of the Urban Water Management Planning Act; the 2020 UWMP is hereby adopted and ordered filed with the City Clerk.; this resolution shall be in full force and effect

1 immediately upon its passage and adoption thereof; the City Council hereby authorizes  
2 staff to file the 2020 UWMP with the California Department of Water Resources within  
3 30 days after this date; and the City Attorney is authorized to make minor typographical  
4 changes to this Resolution that does not change the substance of this Resolution.

5 **PASSED, APPROVED, AND ADOPTED** this 1<sup>st</sup> day of June 2021.

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Graciela Ortiz, Mayor

10 ATTEST:

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13 Sergio Infanzon  
14 Acting City Clerk  
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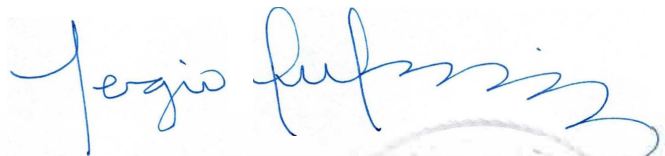
## CERTIFICATION

STATE OF CALIFORNIA       )  
COUNTY OF LOS ANGELES   )   SS  
CITY OF HUNTINGTON PARK)

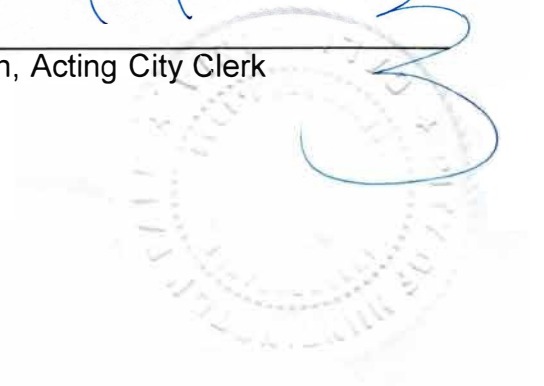
I, Sergio Infanzon, Acting City Clerk of the City of Huntington Park, California, do hereby certify that the foregoing Resolution No. 2021-12 was duly passed and adopted by the City Council of the City of Huntington Park at a Regular Meeting of the City Council held on the 1<sup>st</sup> day of June 2021, by the following vote, to wit:

AYES:	Council Member(s): Avila, Sanabria, Macias, Vice Mayor Martinez, and Mayor Ortiz
NOES:	Council Member(s): None
ABSENT:	Council Member(s): None

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the Seal of the City of Huntington Park, this 2<sup>nd</sup> day of June 2021.



Sergio Infanzon, Acting City Clerk





## **Appendix B: Council Resolution Adopting 2020 WSCP**

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**City of Huntington Park 2020 Urban Water Management Plan**

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**WHEREAS**, the California Water Code Section 10632 requires every urban water supplier to prepare and adopt a Water Shortage Contingency Plan (WSCP) as part of its Urban Water Management Plan (UWMP); and

**WHEREAS**, the City has prepared and adopted a UWMP under separate Resolution No. 2021-11; and

**WHEREAS**, the City has updated its WSCP in accordance with these changes in the Water Code, and said WSCP is included as part of the UWMP; and

**WHEREAS**, the City of is granted the authority by the State Water Code Section 350 and the municipal code to declare a water supply shortage and to adopt by resolution regulations and restrictions on the delivery and consumption of water; and

**WHEREAS**, the City shall file said WSCP with the California Department of Water Resources within 30 days of adoption; and

1

**NOW THEREFORE BE IT RESOLVED, BY THE CITY COUNCIL OF THE  
CITY OF HUNTINGTON PARK AS FOLLOWS:**

**SECTION 1.** The City Council finds that all of the facts set forth in the Recitals of this Resolution are true and correct.

**SECTION 2.** The City is in conformance with all applicable requirements of the Water Code; the WSCP is hereby adopted and ordered filed with the City Clerk; this resolution shall be in full force and effect immediately upon its passage and adoption thereof; the Council hereby authorizes staff to submit the WSCP along with UWMP to the California Department of Water Resources within 30 days after this date; and the City Attorney is authorized to make minor typographical changes to this Resolution that does not change the substance of this Resolution.

**PASSED, APPROVED, AND ADOPTED** this 1<sup>st</sup> day of June 2021.

  
Graciela Ortiz, Mayor

ATTEST:

Sergio Infanzon  
Acting City Clerk

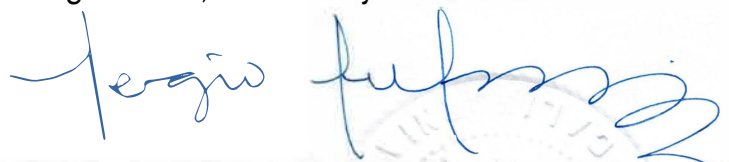
## CERTIFICATION

STATE OF CALIFORNIA       )  
COUNTY OF LOS ANGELES   )   SS  
CITY OF HUNTINGTON PARK)

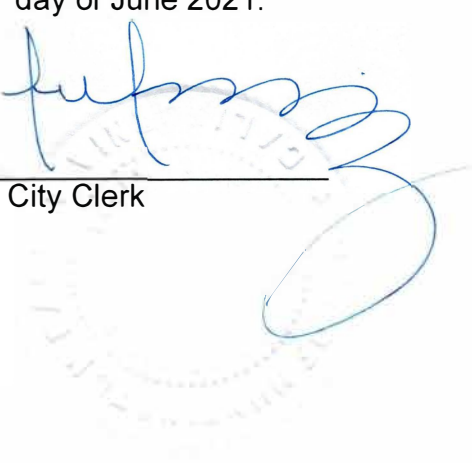
I, Sergio Infanzon, Acting City Clerk of the City of Huntington Park, California, do hereby certify that the foregoing Resolution No. 2021-13 was duly passed and adopted by the City Council of the City of Huntington Park at a Regular Meeting of the City Council held on the 1<sup>st</sup> day of June 2021, by the following vote, to wit:

AYES:	Council Member(s): Avila, Sanabria, Macias, Vice Mayor Martinez, and Mayor Ortiz
NOES:	Council Member(s): None
ABSENT:	Council Member(s): None

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the Seal of the City of Huntington Park, this 2<sup>nd</sup> day of June 2021.



Sergio Infanzon, Acting City Clerk





## **Appendix C: UWMP Act**

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### **City of Huntington Park 2020 Urban Water Management Plan**

# Appendix A. California Water Code – Urban Water Management Planning

**This material is for informational purposes only and not to be used in place of official California Water Code (Water Code).**

This document presents updated sections of Water Code as of January 1, 2020, as compiled by DWR staff. The selection focuses on the portions of code directly relevant to preparation of the urban water management plan and contextually relevant to urban water suppliers and the Department of Water Resources (DWR). This includes the Urban Water Management Planning Act and the Sustainable Water Use and Demand Reduction (SB X7-7), and more. Further legislative information is available on the California Legislative Information website at

<https://leginfo.legislature.ca.gov/>.

The following Water Code sections are included in this appendix.

- **Sustainable Water Use and Demand Reduction (SB X7-7)  
Water Code Division 6, Part 2.55**
  - **Chapter 1. General Declarations and Policy**, Sections 10608 – 10608.8
  - **Chapter 2. Definitions**, Section 10608.12
  - **Chapter 3. Urban Retail Water Suppliers**, Sections 10608.16 – 10608.44
  - **Chapter 4. Agricultural Water Suppliers**, Section 10608.48
  - **Chapter 5. Sustainable Water Management**, Section 10608.50
  - **Chapter 6. Standardized Data Collection**, Section 10608.52
  - **Chapter 7. Funding Provisions**, Sections 10608.56 – 10608.60
  - **Chapter 8. Quantifying Agricultural Water Use Efficiency**, Section 10608.64

- **Urban Water Management Planning Act  
Water Code Division 6, Part 2.6**

- **Chapter 1. General Declaration and Policy**, Sections 10610 – 10610.4
- **Chapter 2. Definitions**, Sections 10611 – 10618
- **Chapter 3. Urban Water Management Plans**
  - Article 1. General Provisions, Sections 10620 – 10621
  - Article 2. Contents of Plans, Sections 10630 – 10634
  - Article 2.5. Water Service Reliability, Section 10635
  - Article 3. Adoption and Implementation of Plans, Sections 10640 – 10645
- **Chapter 4. Miscellaneous Provisions**, Sections 10650 – 10657

**PART 2.55. SUSTAINABLE WATER USE AND DEMAND REDUCTION  
CHAPTER 1. General Declaration and Policy [10608 – 10608.8]**

**10608.** The Legislature finds and declares all of the following:

- (a) Water is a public resource that the California Constitution protects against waste and unreasonable use.
- (b) Growing population, climate change, and the need to protect and grow California’s economy while protecting and restoring our fish and wildlife habitats make it essential that the state manage its water resources as efficiently as possible.
- (c) Diverse regional water supply portfolios will increase water supply reliability and reduce dependence on the Delta.
- (d) Reduced water use through conservation provides significant energy and environmental benefits, and can help protect water quality, improve streamflows, and reduce greenhouse gas emissions.
- (e) The success of state and local water conservation programs to increase efficiency of water use is best determined on the basis of measurable outcomes related to water use or efficiency.
- (f) Improvements in technology and management practices offer the potential for increasing water efficiency in California over time,

providing an essential water management tool to meet the need for water for urban, agricultural, and environmental uses.

- (g) The Governor has called for a 20 percent per capita reduction in urban water use statewide by 2020.
- (h) The factors used to formulate water use efficiency targets can vary significantly from location to location based on factors including weather, patterns of urban and suburban development, and past efforts to enhance water use efficiency.
- (i) Per capita water use is a valid measure of a water provider's efforts to reduce urban water use within its service area. However, per capita water use is less useful for measuring relative water use efficiency between different water providers. Differences in weather, historical patterns of urban and suburban development, and density of housing in a particular location need to be considered when assessing per capita water use as a measure of efficiency.

**10608.4.** It is the intent of the Legislature, by the enactment of this part, to do all of the following:

- (a) Require all water suppliers to increase the efficiency of use of this essential resource.
- (b) Establish a framework to meet the state targets for urban water conservation identified in this part and called for by the Governor.
- (c) Measure increased efficiency of urban water use on a per capita basis.
- (d) Establish a method or methods for urban retail water suppliers to determine targets for achieving increased water use efficiency by the year 2020, in accordance with the Governor's goal of a 20-percent reduction.
- (e) Establish consistent water use efficiency planning and implementation standards for urban water suppliers and agricultural water suppliers.
- (f) Promote urban water conservation standards that are consistent with the California Urban Water Conservation Council's adopted best management practices and the requirements for demand management in Section 10631.

- (g) Establish standards that recognize and provide credit to water suppliers that made substantial capital investments in urban water conservation since the drought of the early 1990s.
- (h) Recognize and account for the investment of urban retail water suppliers in providing recycled water for beneficial uses.
- (i) Require implementation of specified efficient water management practices for agricultural water suppliers.
- (j) Support the economic productivity of California's agricultural, commercial, and industrial sectors.
- (k) Advance regional water resources management.

**10608.8.** (a) (1) Water use efficiency measures adopted and implemented pursuant to this part or Part 2.8 (commencing with Section 10800) are water conservation measures subject to the protections provided under Section 1011.

- (2) Because an urban agency is not required to meet its urban water use target until 2020 pursuant to subdivision (b) of Section 10608.24, an urban retail water supplier's failure to meet those targets shall not establish a violation of law for purposes of any state administrative or judicial proceeding prior to January 1, 2021. Nothing in this paragraph limits the use of data reported to the department or the board in litigation or an administrative proceeding. This paragraph shall become inoperative on January 1, 2021.
  - (3) To the extent feasible, the department and the board shall provide for the use of water conservation reports required under this part to meet the requirements of Section 1011 for water conservation reporting.
- (b) This part does not limit or otherwise affect the application of Chapter 3.5 (commencing with Section 11340), Chapter 4 (commencing with Section 11370), Chapter 4.5 (commencing with Section 11400), and Chapter 5 (commencing with Section 11500) of Part 1 of Division 3 of Title 2 of the Government Code.
  - (c) This part does not require a reduction in the total water used in the agricultural or urban sectors, because other factors, including, but not limited to, changes in agricultural economics or population

growth may have greater effects on water use. This part does not limit the economic productivity of California's agricultural, commercial, or industrial sectors.

- (d) The requirements of this part do not apply to an agricultural water supplier that is a party to the Quantification Settlement Agreement, as defined in subdivision (a) of Section 1 of Chapter 617 of the Statutes of 2002, during the period within which the Quantification Settlement Agreement remains in effect. After the expiration of the Quantification Settlement Agreement, to the extent conservation water projects implemented as part of the Quantification Settlement Agreement remain in effect, the conserved water created as part of those projects shall be credited against the obligations of the agricultural water supplier pursuant to this part.

## **CHAPTER 2. Definitions [10608.12]**

**10608.12.** Unless the context otherwise requires, the following definitions govern the construction of this part:

- (a) "Agricultural water supplier" means a water supplier, either publicly or privately owned, providing water to 10,000 or more irrigated acres, excluding recycled water. "Agricultural water supplier" includes a supplier or contractor for water, regardless of the basis of right, that distributes or sells water for ultimate resale to customers. "Agricultural water supplier" does not include the department.
- (b) "Base daily per capita water use" means any of the following:
  - (1) The urban retail water supplier's estimate of its average gross water use, reported in gallons per capita per day and calculated over a continuous 10-year period ending no earlier than December 31, 2004, and no later than December 31, 2010.
  - (2) For an urban retail water supplier that meets at least 10 percent of its 2008 measured retail water demand through recycled water that is delivered within the service area of an urban retail water supplier or its urban wholesale water supplier, the urban retail water supplier may extend the

calculation described in paragraph (1) up to an additional five years to a maximum of a continuous 15-year period ending no earlier than December 31, 2004, and no later than December 31, 2010.

- (3) For the purposes of Section 10608.22, the urban retail water supplier's estimate of its average gross water use, reported in gallons per capita per day and calculated over a continuous five-year period ending no earlier than December 31, 2007, and no later than December 31, 2010.
- (c) "Baseline commercial, industrial, and institutional water use" means an urban retail water supplier's base daily per capita water use for commercial, industrial, and institutional users.
- (d) "CII water use" means water used by commercial water users, industrial water users, institutional water users, and large landscape water users.
- (e) "Commercial water user" means a water user that provides or distributes a product or service.
- (f) "Compliance daily per capita water use" means the gross water use during the final year of the reporting period, reported in gallons per capita per day.
- (g) "Disadvantaged community" means a community with an annual median household income that is less than 80 percent of the statewide annual median household income.
- (h) "Gross water use" means the total volume of water, whether treated or untreated, entering the distribution system of an urban retail water supplier, excluding all of the following:
- (1) Recycled water that is delivered within the service area of an urban retail water supplier or its urban wholesale water supplier.
  - (2) The net volume of water that the urban retail water supplier places into long-term storage.
  - (3) The volume of water the urban retail water supplier conveys for use by another urban water supplier.
  - (4) The volume of water delivered for agricultural use, except as otherwise provided in subdivision (f) of Section 10608.24.
- (i) "Industrial water user" means a water user that is primarily a

manufacturer or processor of materials as defined by the North American Industry Classification System code sectors 31 to 33, inclusive, or an entity that is a water user primarily engaged in research and development.

- (j) “Institutional water user” means a water user dedicated to public service. This type of user includes, among other users, higher education institutions, schools, courts, churches, hospitals, government facilities, and nonprofit research institutions.
- (k) “Interim urban water use target” means the midpoint between the urban retail water supplier’s base daily per capita water use and the urban retail water supplier’s urban water use target for 2020.
- (l) “Large landscape” means a nonresidential landscape as described in the performance measures for CII water use adopted pursuant to Section 10609.10.
- (m) “Locally cost effective” means that the present value of the local benefits of implementing an agricultural efficiency water management practice is greater than or equal to the present value of the local cost of implementing that measure.
- (n) “Performance measures” means actions to be taken by urban retail water suppliers that will result in increased water use efficiency by CII water users. Performance measures may include, but are not limited to, educating CII water users on best management practices, conducting water use audits, and preparing water management plans. Performance measures do not include process water.
- (o) “Potable reuse” means direct potable reuse, indirect potable reuse for groundwater recharge, and reservoir water augmentation as those terms are defined in Section 13561.
- (p) “Process water” means water used by industrial water users for producing a product or product content or water used for research and development. Process water includes, but is not limited to, continuous manufacturing processes, and water used for testing, cleaning, and maintaining equipment. Water used to cool machinery or buildings used in the manufacturing process or necessary to maintain product quality or chemical characteristics for product manufacturing or control rooms, data centers, laboratories, clean rooms, and other industrial facility units that

are integral to the manufacturing or research and development process is process water. Water used in the manufacturing process that is necessary for complying with local, state, and federal health and safety laws, and is not incidental water, is process water. Process water does not mean incidental water uses.

- (q) "Recycled water" means recycled water, as defined in subdivision (n) of Section 13050.
- (r) "Regional water resources management" means sources of supply resulting from watershed-based planning for sustainable local water reliability or any of the following alternative sources of water:
  - (1) The capture and reuse of stormwater or rainwater.
  - (2) The use of recycled water.
  - (3) The desalination of brackish groundwater.
  - (4) The conjunctive use of surface water and groundwater in a manner that is consistent with the safe yield of the groundwater basin.
- (s) "Reporting period" means the years for which an urban retail water supplier reports compliance with the urban water use targets.
- (t) "Urban retail water supplier" means a water supplier, either publicly or privately owned, that directly provides potable municipal water to more than 3,000 end users or that supplies more than 3,000 acre-feet of potable water annually at retail for municipal purposes.
- (u) "Urban water use objective" means an estimate of aggregate efficient water use for the previous year based on adopted water use efficiency standards and local service area characteristics for that year, as described in Section 10609.20.
- (v) "Urban water use target" means the urban retail water supplier's targeted future daily per capita water use.
- (w) "Urban wholesale water supplier" means a water supplier, either publicly or privately owned, that provides more than 3,000 acre-feet of water annually at wholesale for potable municipal purposes.

### **CHAPTER 3. Urban Retail Water Suppliers [10608.16 – 10608.44]**

**10608.16.** (a) The state shall achieve a 20-percent reduction in urban per capita water use in California on or before December 31, 2020.

- (1) The state shall make incremental progress towards the state target specified in subdivision (a) by reducing urban per capita water use by at least 10 percent on or before December 31, 2015.

**10608.20.** (a) (1) Each urban retail water supplier shall develop urban water use targets and an interim urban water use target by July 1, 2011. Urban retail water suppliers may elect to determine and report progress toward achieving these targets on an individual or regional basis, as provided in subdivision (a) of Section 10608.28, and may determine the targets on a fiscal year or calendar year basis.

- (2) It is the intent of the Legislature that the urban water use targets described in paragraph (1) cumulatively result in a 20-percent reduction from the baseline daily per capita water use by December 31, 2020.

(b) An urban retail water supplier shall adopt one of the following methods for determining its urban water use target pursuant to subdivision (a):

- (1) Eighty percent of the urban retail water supplier's baseline per capita daily water use.
- (2) The per capita daily water use that is estimated using the sum of the following performance standards:
  - (A) For indoor residential water use, 55 gallons per capita daily water use as a provisional standard. Upon completion of the department's 2017 report to the Legislature pursuant to Section 10608.42, this standard may be adjusted by the Legislature by statute.
  - (B) For landscape irrigated through dedicated or residential meters or connections, water efficiency equivalent to the standards of the Model Water Efficient Landscape Ordinance set forth in Chapter 2.7 (commencing with Section 490) of Division 2 of Title 23 of the California Code of Regulations, as in effect the later of the year of the landscape's installation or 1992. An urban retail

water supplier using the approach specified in this subparagraph shall use satellite imagery, site visits, or other best available technology to develop an accurate estimate of landscaped areas.

(C) For commercial, industrial, and institutional uses, a 10-percent reduction in water use from the baseline commercial, industrial, and institutional water use by 2020.

(3) Ninety-five percent of the applicable state hydrologic region target, as set forth in the state's draft 20x2020 Water Conservation Plan (dated April 30, 2009). If the service area of an urban water supplier includes more than one hydrologic region, the supplier shall apportion its service area to each region based on population or area.

(4) A method that shall be identified and developed by the department, through a public process, and reported to the Legislature no later than December 31, 2010. The method developed by the department shall identify per capita targets that cumulatively result in a statewide 20-percent reduction in urban daily per capita water use by December 31, 2020. In developing urban daily per capita water use targets, the department shall do all of the following:

(A) Consider climatic differences within the state.

(B) Consider population density differences within the state.

(C) Provide flexibility to communities and regions in meeting the targets.

(D) Consider different levels of per capita water use according to plant water needs in different regions.

(E) Consider different levels of commercial, industrial, and institutional water use in different regions of the state.

(F) Avoid placing an undue hardship on communities that have implemented conservation measures or taken actions to keep per capita water use low.

(c) If the department adopts a regulation pursuant to paragraph (4) of

subdivision (b) that results in a requirement that an urban retail water supplier achieve a reduction in daily per capita water use that is greater than 20 percent by December 31, 2020, an urban retail water supplier that adopted the method described in paragraph (4) of subdivision (b) may limit its urban water use target to a reduction of not more than 20 percent by December 31, 2020, by adopting the method described in paragraph (1) of subdivision (b).

- (d) The department shall update the method described in paragraph (4) of subdivision (b) and report to the Legislature by December 31, 2014. An urban retail water supplier that adopted the method described in paragraph (4) of subdivision (b) may adopt a new urban daily per capita water use target pursuant to this updated method.
- (e) An urban retail water supplier shall include in its urban water management plan due in 2010 pursuant to Part 2.6 (commencing with Section 10610) the baseline daily per capita water use, urban water use target, interim urban water use target, and compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data.
- (f) When calculating per capita values for the purposes of this chapter, an urban retail water supplier shall determine population using federal, state, and local population reports and projections.
- (g) An urban retail water supplier may update its 2020 urban water use target in its 2015 urban water management plan required pursuant to Part 2.6 (commencing with Section 10610).
- (h) (1) The department, through a public process and in consultation with the California Urban Water Conservation Council, shall develop technical methodologies and criteria for the consistent implementation of this part, including, but not limited to, both of the following:
  - (A) Methodologies for calculating base daily per capita water use, baseline commercial, industrial, and institutional water use, compliance daily per capita water use, gross water use, service area population, indoor residential water use, and landscaped area water use.

- (B) Criteria for adjustments pursuant to subdivisions (d) and (e) of Section 10608.24.
- (2) The department shall post the methodologies and criteria developed pursuant to this subdivision on its internet website, and make written copies available, by October 1, 2010. An urban retail water supplier shall use the methods developed by the department in compliance with this part.
- (i) (1) The department shall adopt regulations for implementation of the provisions relating to process water in accordance with Section 10608.12, subdivision (e) of Section 10608.24, and subdivision (d) of Section 10608.26.
- (2) The initial adoption of a regulation authorized by this subdivision is deemed to address an emergency, for purposes of Sections 11346.1 and 11349.6 of the Government Code, and the department is hereby exempted for that purpose from the requirements of subdivision (b) of Section 11346.1 of the Government Code. After the initial adoption of an emergency regulation pursuant to this subdivision, the department shall not request approval from the Office of Administrative Law to readopt the regulation as an emergency regulation pursuant to Section 11346.1 of the Government Code.
- (j) (1) An urban retail water supplier is granted an extension to July 1, 2011, for adoption of an urban water management plan pursuant to Part 2.6 (commencing with Section 10610) due in 2010 to allow the use of technical methodologies developed by the department pursuant to paragraph (4) of subdivision (b) and subdivision (h). An urban retail water supplier that adopts an urban water management plan due in 2010 that does not use the methodologies developed by the department pursuant to subdivision (h) shall amend the plan by July 1, 2011, to comply with this part.
- (2) An urban wholesale water supplier whose urban water management plan prepared pursuant to Part 2.6 (commencing with Section 10610) was due and not submitted in 2010 is granted an extension to July 1, 2011, to permit coordination between an urban wholesale water

supplier and urban retail water suppliers.

**10608.22.** Notwithstanding the method adopted by an urban retail water supplier pursuant to Section 10608.20, an urban retail water supplier's per capita daily water use reduction shall be no less than 5 percent of base daily per capita water use as defined in paragraph (3) of subdivision (b) of Section 10608.12. This section does not apply to an urban retail water supplier with a base daily per capita water use at or below 100 gallons per capita per day.

**10608.24.** (a) Each urban retail water supplier shall meet its interim urban water use target by December 31, 2015.

- (b) Each urban retail water supplier shall meet its urban water use target by December 31, 2020.
- (c) An urban retail water supplier's compliance daily per capita water use shall be the measure of progress toward achievement of its urban water use target.
- (d) (1) When determining compliance daily per capita water use, an urban retail water supplier may consider the following factors:
  - (A) Differences in evapotranspiration and rainfall in the baseline period compared to the compliance reporting period.
  - (B) Substantial changes to commercial or industrial water use resulting from increased business output and economic development that have occurred during the reporting period.
  - (C) Substantial changes to institutional water use resulting from fire suppression services or other extraordinary events, or from new or expanded operations, that have occurred during the reporting period.
- (2) If the urban retail water supplier elects to adjust its estimate of compliance daily per capita water use due to one or more of the factors described in paragraph (1), it shall provide the basis for, and data supporting, the adjustment in the report required by Section 10608.40.
- (e) When developing the urban water use target pursuant to Section 10608.20, an urban retail water supplier that has a substantial

percentage of industrial water use in its service area may exclude process water from the calculation of gross water use to avoid a disproportionate burden on another customer sector.

- (f) (1) An urban retail water supplier that includes agricultural water use in an urban water management plan pursuant to Part 2.6 (commencing with Section 10610) may include the agricultural water use in determining gross water use. An urban retail water supplier that includes agricultural water use in determining gross water use and develops its urban water use target pursuant to paragraph (2) of subdivision (b) of Section 10608.20 shall use a water efficient standard for agricultural irrigation of 100 percent of reference evapotranspiration multiplied by the crop coefficient for irrigated acres.
- (2) An urban retail water supplier, that is also an agricultural water supplier, is not subject to the requirements of Chapter 4 (commencing with Section 10608.48), if the agricultural water use is incorporated into its urban water use target pursuant to paragraph (1).

**10608.26.** (a) In complying with this part, an urban retail water supplier shall conduct at least one public hearing to accomplish all of the following:

- (1) Allow community input regarding the urban retail water supplier's implementation plan for complying with this part.
  - (2) Consider the economic impacts of the urban retail water supplier's implementation plan for complying with this part.
  - (3) Adopt a method, pursuant to subdivision (b) of Section 10608.20, for determining its urban water use target.
- (b) In complying with this part, an urban retail water supplier may meet its urban water use target through efficiency improvements in any combination among its customer sectors. An urban retail water supplier shall avoid placing a disproportionate burden on any customer sector.
- (c) For an urban retail water supplier that supplies water to a United States Department of Defense military installation, the urban retail water supplier's implementation plan for complying with this part shall consider the conservation of that military installation under

federal Executive Order 13514.

- (d) (1) Any ordinance or resolution adopted by an urban retail water supplier after the effective date of this section shall not require existing customers as of the effective date of this section, to undertake changes in product formulation, operations, or equipment that would reduce process water use, but may provide technical assistance and financial incentives to those customers to implement efficiency measures for process water. This section shall not limit an ordinance or resolution adopted pursuant to a declaration of drought emergency by an urban retail water supplier.
- (2) This part shall not be construed or enforced so as to interfere with the requirements of Chapter 4 (commencing with Section 113980) to Chapter 13 (commencing with Section 114380), inclusive, of Part 7 of Division 104 of the Health and Safety Code, or any requirement or standard for the protection of public health, public safety, or worker safety established by federal, state, or local government or recommended by recognized standard setting organizations or trade associations.

**10608.28.** (a) An urban retail water supplier may meet its urban water use target within its retail service area, or through mutual agreement, by any of the following:

- (1) Through an urban wholesale water supplier.
- (2) Through a regional agency authorized to plan and implement water conservation, including, but not limited to, an agency established under the Bay Area Water Supply and Conservation Agency Act (Division 31 (commencing with Section 81300)).
- (3) Through a regional water management group as defined in Section 10537.
- (4) By an integrated regional water management funding area.
- (5) By hydrologic region.
- (6) Through other appropriate geographic scales for which computation methods have been developed by the

department.

- (b) A regional water management group, with the written consent of its member agencies, may undertake any or all planning, reporting, and implementation functions under this chapter for the member agencies that consent to those activities. Any data or reports shall provide information both for the regional water management group and separately for each consenting urban retail water supplier and urban wholesale water supplier.

**10608.32.** All costs incurred pursuant to this part by a water utility regulated by the Public Utilities Commission may be recoverable in rates subject to review and approval by the Public Utilities Commission, and may be recorded in a memorandum account and reviewed for reasonableness by the Public Utilities Commission.

**10608.34.** (a) (1) On or before January 1, 2017, the department shall adopt rules for all of the following:

- (A) The conduct of standardized water loss audits by urban retail water suppliers in accordance with the method adopted by the American Water Works Association in the third edition of Water Audits and Loss Control Programs, Manual M36 and in the Free Water Audit Software, version 5.0.
- (B) The process for validating a water loss audit report prior to submitting the report to the department. For the purposes of this section, “validating” is a process whereby an urban retail water supplier uses a technical expert to confirm the basis of all data entries in the urban retail water supplier’s water loss audit report and to appropriately characterize the quality of the reported data. The validation process shall follow the principles and terminology laid out by the American Water Works Association in the third edition of Water Audits and Loss Control Programs, Manual M36 and in the Free Water Audit Software, version 5.0. A validated water loss audit report shall include the name and technical qualifications of the person engaged for validation.
- (C) The technical qualifications required of a person to

- engage in validation, as described in subparagraph (B).
  - (D) The certification requirements for a person selected by an urban retail water supplier to provide validation of its own water loss audit report.
  - (E) The method of submitting a water loss audit report to the department.
- (2) The department shall update rules adopted pursuant to paragraph (1) no later than six months after the release of subsequent editions of the American Water Works Association's Water Audits and Loss Control Programs, Manual M36. Except as provided by the department, until the department adopts updated rules pursuant to this paragraph, an urban retail water supplier may rely upon a subsequent edition of the American Water Works Association's Water Audits and Loss Control Programs, Manual M36 or the Free Water Audit Software.
- (b) (1) On or before October 1 of each year until October 1, 2023, each urban retail water supplier reporting on a calendar year basis shall submit a completed and validated water loss audit report for the previous calendar year or the previous fiscal year as prescribed by the department pursuant to subdivision (a).
- (2) On or before January 1 of each year until January 1, 2024, each urban retail water supplier reporting on a fiscal year basis shall submit a completed and validated water loss audit report for the previous fiscal year as prescribed by the department pursuant to subdivision (a).
- (3) On or before January 1, 2024, and on or before January 1 of each year thereafter, each urban retail water supplier shall submit a completed and validated water loss audit report for the previous calendar year or previous fiscal year as part of the report submitted to the department pursuant to subdivision (a) of Section 10609.24 and as prescribed by the department pursuant to subdivision (a).
- (4) Water loss audit reports submitted on or before October 1, 2017, may be completed and validated with assistance as described in subdivision (c).

- (c) Using funds available for the 2016–17 fiscal year, the board shall contribute up to four hundred thousand dollars (\$400,000) towards procuring water loss audit report validation assistance for urban retail water suppliers.
- (d) Each water loss audit report submitted to the department shall be accompanied by information, in a form specified by the department, identifying steps taken in the preceding year to increase the validity of data entered into the final audit, reduce the volume of apparent losses, and reduce the volume of real losses.
- (e) At least one of the following employees of an urban retail water supplier shall attest to each water loss audit report submitted to the department:
  - (1) The chief financial officer.
  - (2) The chief engineer.
  - (3) The general manager.
- (f) The department shall deem incomplete and return to the urban retail water supplier any final water loss audit report found by the department to be incomplete, not validated, unattested, or incongruent with known characteristics of water system operations. A water supplier shall resubmit a completed water loss audit report within 90 days of an audit being returned by the department.
- (g) The department shall post all validated water loss audit reports on its internet website in a manner that allows for comparisons across water suppliers. The department shall make the validated water loss audit reports available for public viewing in a timely manner after their receipt.
- (h) Using available funds, the department shall provide technical assistance to guide urban retail water suppliers' water loss detection programs, including, but not limited to, metering techniques, pressure management techniques, condition-based assessment techniques for transmission and distribution pipelines, and utilization of portable and permanent water loss detection devices.
- (i) No earlier than January 1, 2019, and no later than July 1, 2020, the board shall adopt rules requiring urban retail water suppliers to meet performance standards for the volume of water losses. In

adopting these rules, the board shall employ full life-cycle cost accounting to evaluate the costs of meeting the performance standards. The board may consider establishing a minimum allowable water loss threshold that, if reached and maintained by an urban water supplier, would exempt the urban water supplier from further water loss reduction requirements.

**10608.35.** (a) The department, in coordination with the board, shall conduct necessary studies and investigations and make a recommendation to the Legislature, by January 1, 2020, on the feasibility of developing and enacting water loss reporting requirements for urban wholesale water suppliers.

(b) The studies and investigations shall include an evaluation of the suitability of applying the processes and requirements of Section 10608.34 to urban wholesale water suppliers.

(c) In conducting necessary studies and investigations and developing its recommendation, the department shall solicit broad public participation from stakeholders and other interested persons.

**10608.36.** Urban wholesale water suppliers shall include in the urban water management plans required pursuant to Part 2.6 (commencing with Section 10610) an assessment of their present and proposed future measures, programs, and policies to help achieve the water use reductions required by this part.

**10608.40.** Urban water retail suppliers shall report to the department on their progress in meeting their urban water use targets as part of their urban water management plans submitted pursuant to Section 10631. The data shall be reported using a standardized form developed pursuant to Section 10608.52.

**10608.42.** (a) The department shall review the 2015 urban water management plans and report to the Legislature by July 1, 2017, on progress towards achieving a 20-percent reduction in urban water use by December 31, 2020. The report shall include recommendations on changes to water efficiency standards or urban water use targets to achieve the 20-percent reduction and to reflect updated efficiency information and technology changes.

- (b) A report to be submitted pursuant to subdivision (a) shall be submitted in compliance with Section 9795 of the Government Code.

**10608.43.** The department, in conjunction with the California Urban Water Conservation Council, by April 1, 2010, shall convene a representative task force consisting of academic experts, urban retail water suppliers, environmental organizations, commercial water users, industrial water users, and institutional water users to develop alternative best management practices for commercial, industrial, and institutional users and an assessment of the potential statewide water use efficiency improvement in the commercial, industrial, and institutional sectors that would result from implementation of these best management practices. The taskforce, in conjunction with the department, shall submit a report to the Legislature by April 1, 2012, that shall include a review of multiple sectors within commercial, industrial, and institutional users and that shall recommend water use efficiency standards for commercial, industrial, and institutional users among various sectors of water use. The report shall include, but not be limited to, the following:

- (a) Appropriate metrics for evaluating commercial, industrial, and institutional water use.
- (b) Evaluation of water demands for manufacturing processes, goods, and cooling.
- (c) Evaluation of public infrastructure necessary for delivery of recycled water to the commercial, industrial, and institutional sectors.
- (d) Evaluation of institutional and economic barriers to increased recycled water use within the commercial, industrial, and institutional sectors.
- (e) Identification of technical feasibility and cost of the best management practices to achieve more efficient water use statewide in the commercial, industrial, and institutional sectors that is consistent with the public interest and reflects past investments in water use efficiency.

**10608.44.** Each state agency shall reduce water use at facilities it operates to support urban retail water suppliers in meeting the target identified in

## Section 10608.16.

**CHAPTER 4. Agricultural Water Suppliers [10608.48]**

**10608.48.** (a) On or before July 31, 2012, an agricultural water supplier shall implement efficient water management practices pursuant to subdivisions (b) and (c).

- (b) Agricultural water suppliers shall implement both of the following critical efficient management practices:
  - (1) Measure the volume of water delivered to customers with sufficient accuracy to comply with subdivision (a) of Section 531.10 and to implement paragraph (2).
  - (2) Adopt a pricing structure for water customers based at least in part on quantity delivered.
- (c) Agricultural water suppliers shall implement additional efficient management practices, including, but not limited to, practices to accomplish all of the following, if the measures are locally cost effective and technically feasible:
  - (1) Facilitate alternative land use for lands with exceptionally high water duties or whose irrigation contributes to significant problems, including drainage.
  - (2) Facilitate use of available recycled water that otherwise would not be used beneficially, meets all health and safety criteria, and does not harm crops or soils.
  - (3) Facilitate the financing of capital improvements for on-farm irrigation systems.
  - (4) Implement an incentive pricing structure that promotes one or more of the following goals:
    - (A) More efficient water use at the farm level.
    - (B) Conjunctive use of groundwater.
    - (C) Appropriate increase of groundwater recharge.
    - (D) Reduction in problem drainage.

- (E) Improved management of environmental resources.
- (F) Effective management of all water sources throughout the year by adjusting seasonal pricing structures based on current conditions.
- (5) Expand line or pipe distribution systems, and construct regulatory reservoirs to increase distribution system flexibility and capacity, decrease maintenance, and reduce seepage.
- (6) Increase flexibility in water ordering by, and delivery to, water customers within operational limits.
- (7) Construct and operate supplier spill and tailwater recovery systems.
- (8) Increase planned conjunctive use of surface water and groundwater within the supplier service area.
- (9) Automate canal control structures.
- (10) Facilitate or promote customer pump testing and evaluation.
- (11) Designate a water conservation coordinator who will develop and implement the water management plan and prepare progress reports.
- (12) Provide for the availability of water management services to water users. These services may include, but are not limited to, all of the following:
  - (A) On-farm irrigation and drainage system evaluations.
  - (B) Normal year and real-time irrigation scheduling and crop evapotranspiration information.
  - (C) Surface water, groundwater, and drainage water quantity and quality data.
  - (D) Agricultural water management educational programs and materials for farmers, staff, and the public.
- (13) Evaluate the policies of agencies that provide the supplier with water to identify the potential for institutional changes to allow more flexible water deliveries and storage.
- (14) Evaluate and improve the efficiencies of the supplier's

pumps.

- (d) Agricultural water suppliers shall include in the agricultural water management plans required pursuant to Part 2.8 (commencing with Section 10800) a report on which efficient water management practices have been implemented and are planned to be implemented, an estimate of the water use efficiency improvements that have occurred since the last report, and an estimate of the water use efficiency improvements estimated to occur five and 10 years in the future. If an agricultural water supplier determines that an efficient water management practice is not locally cost effective or technically feasible, the supplier shall submit information documenting that determination.
- (e) The department shall require information about the implementation of efficient water management practices to be reported using a standardized form developed pursuant to Section 10608.52. (f) An agricultural water supplier may meet the requirements of subdivisions (d) and (e) by submitting to the department a water conservation plan submitted to the United States Bureau of Reclamation that meets the requirements described in Section 10828.
- (f) On or before December 31, 2013, December 31, 2016, and December 31, 2021, the department, in consultation with the board, shall submit to the Legislature a report on the agricultural efficient water management practices that have been implemented and are planned to be implemented and an assessment of the manner in which the implementation of those efficient water management practices has affected and will affect agricultural operations, including estimated water use efficiency improvements, if any.
- (g) The department may update the efficient water management practices required pursuant to subdivision (c), in consultation with the Agricultural Water Management Council, the United States Bureau of Reclamation, and the board. All efficient water management practices for agricultural water use pursuant to this chapter shall be adopted or revised by the department only after the department conducts public hearings to allow participation of the diverse geographical areas and interests of the state.

- (h) (1) The department shall adopt regulations that provide for a range of options that agricultural water suppliers may use or implement to comply with the measurement requirement in paragraph (1) of subdivision (b).
- (2) The initial adoption of a regulation authorized by this subdivision is deemed to address an emergency, for purposes of Sections 11346.1 and 11349.6 of the Government Code, and the department is hereby exempted for that purpose from the requirements of subdivision (b) of Section 11346.1 of the Government Code. After the initial adoption of an emergency regulation pursuant to this subdivision, the department shall not request approval from the Office of Administrative Law to readopt the regulation as an emergency regulation pursuant to Section 11346.1 of the Government Code.

## **CHAPTER 5. Sustainable Water Management [10608.50]**

**10608.50.** (a) The department, in consultation with the board, shall promote implementation of regional water resources management practices through increased incentives and removal of barriers consistent with state and federal law. Potential changes may include, but are not limited to, all of the following:

- (1) Revisions to the requirements for urban and agricultural water management plans.
- (2) Revisions to the requirements for integrated regional water management plans.
- (3) Revisions to the eligibility for state water management grants and loans.
- (4) Revisions to state or local permitting requirements that increase water supply opportunities, but do not weaken water quality protection under state and federal law.
- (5) Increased funding for research, feasibility studies, and project construction.
- (6) Expanding technical and educational support for local land use and water management agencies.

- (b) No later than January 1, 2011, and updated as part of the California Water Plan, the department, in consultation with the board, and with public input, shall propose new statewide targets, or review and update existing statewide targets, for regional water resources management practices, including, but not limited to, recycled water, brackish groundwater desalination, and infiltration and direct use of urban stormwater runoff.

## **CHAPTER 6. Standardized Data Collection [10608.52]**

**10608.52.** (a) The department, in consultation with the board, the California Bay-Delta Authority or its successor agency, the State Department of Public Health, and the Public Utilities Commission, shall develop a single standardized water use reporting form to meet the water use information needs of each agency, including the needs of urban water suppliers that elect to determine and report progress toward achieving targets on a regional basis as provided in subdivision (a) of Section 10608.28.

- (b) At a minimum, the form shall be developed to accommodate information sufficient to assess an urban water supplier's compliance with conservation targets pursuant to Section 10608.24 and an agricultural water supplier's compliance with implementation of efficient water management practices pursuant to subdivision (a) of Section 10608.48. The form shall accommodate reporting by urban water suppliers on an individual or regional basis as provided in subdivision (a) of Section 10608.28.

## **CHAPTER 7. Funding Provisions [10608.56 – 10608.60]**

**10608.56.** (a) On and after July 1, 2016, an urban retail water supplier is not eligible for a water grant or loan awarded or administered by the state unless the supplier complies with this part.

- (b) On and after July 1, 2013, an agricultural water supplier is not eligible for a water grant or loan awarded or administered by the state unless the supplier complies with this part.
- (c) Notwithstanding subdivision (a), the department shall determine that an urban retail water supplier is eligible for a water grant or loan even though the supplier has not met the per capita

reductions required pursuant to Section 10608.24, if the urban retail water supplier has submitted to the department for approval a schedule, financing plan, and budget, to be included in the grant or loan agreement, for achieving the per capita reductions. The supplier may request grant or loan funds to achieve the per capita reductions to the extent the request is consistent with the eligibility requirements applicable to the water funds.

- (d) Notwithstanding subdivision (b), the department shall determine that an agricultural water supplier is eligible for a water grant or loan even though the supplier is not implementing all of the efficient water management practices described in Section 10608.48, if the agricultural water supplier has submitted to the department for approval a schedule, financing plan, and budget, to be included in the grant or loan agreement, for implementation of the efficient water management practices. The supplier may request grant or loan funds to implement the efficient water management practices to the extent the request is consistent with the eligibility requirements applicable to the water funds.
- (e) Notwithstanding subdivision (a), the department shall determine that an urban retail water supplier is eligible for a water grant or loan even though the supplier has not met the per capita reductions required pursuant to Section 10608.24, if the urban retail water supplier has submitted to the department for approval documentation demonstrating that its entire service area qualifies as a disadvantaged community.
- (f) The department shall not deny eligibility to an urban retail water supplier or agricultural water supplier in compliance with the requirements of this part and Part 2.8 (commencing with Section 10800), that is participating in a multiagency water project, or an integrated regional water management plan, developed pursuant to Section 75026 of the Public Resources Code, solely on the basis that one or more of the agencies participating in the project or plan is not implementing all of the requirements of this part or Part 2.8 (commencing with Section 10800).

**10608.60.** (a) It is the intent of the Legislature that funds made available by Section 75026 of the Public Resources Code should be expended, consistent with Division 43 (commencing with Section 75001) of the Public

Resources Code and upon appropriation by the Legislature, for grants to implement this part. In the allocation of funding, it is the intent of the Legislature that the department give consideration to disadvantaged communities to assist in implementing the requirements of this part.

- (b) It is the intent of the Legislature that funds made available by Section 75041 of the Public Resources Code, should be expended, consistent with Division 43 (commencing with Section 75001) of the Public Resources Code and upon appropriation by the Legislature, for direct expenditures to implement this part.

## **CHAPTER 8. Quantifying Agricultural Water Use Efficiency [10608.64]**

**10608.64.** The department, in consultation with the Agricultural Water Management Council, academic experts, and other stakeholders, shall develop a methodology for quantifying the efficiency of agricultural water use. Alternatives to be assessed shall include, but not be limited to, determination of efficiency levels based on crop type or irrigation system distribution uniformity. On or before December 31, 2011, the department shall report to the Legislature on a proposed methodology and a plan for implementation. The plan shall include the estimated implementation costs and the types of data needed to support the methodology. Nothing in this section authorizes the department to implement a methodology established pursuant to this section.

## **PART 2.55. SUSTAINABLE WATER USE AND DEMAND REDUCTION [10608 – 10609.42]**

## **CHAPTER 9. Urban Water Use Objectives and Water Use Reporting [10609 – 10609.38]**

**10609.** (a) The Legislature finds and declares that this chapter establishes a method to estimate the aggregate amount of water that would have been delivered the previous year by an urban retail water supplier if all that water had been used efficiently. This estimated aggregate water use is the urban retail water supplier's urban water use objective. The method is based on water use efficiency standards and local service area characteristics for that year. By comparing the amount of water actually used in the previous year with the urban water use objective, local urban water suppliers will be in a better position to help eliminate unnecessary use of water; that is, water used in excess of that needed to accomplish the intended beneficial use.

(b) The Legislature further finds and declares all of the following:

(1) This chapter establishes standards and practices for the following water uses:

- (A) Indoor residential use.
- (B) Outdoor residential use.
- (C) CII water use.
- (D) Water losses.
- (E) Other unique local uses and situations that can have a material effect on an urban water supplier's total water use.

(2) This chapter further does all of the following:

- (A) Establishes a method to calculate each urban water use objective.
- (B) Considers recycled water quality in establishing efficient irrigation standards.
- (C) Requires the department to provide or otherwise identify data regarding the unique local conditions to support the calculation of an urban water use objective.
- (D) Provides for the use of alternative sources of data if alternative sources are shown to be as accurate as, or more accurate than, the data provided by the department.
- (E) Requires annual reporting of the previous year's water use with the urban water use objective.
- (F) Provides a bonus incentive for the amount of potable recycled water used the previous year when comparing the previous year's water use with the urban water use objective, of up to 10 percent of the urban water use objective.

(3) This chapter requires the department and the board to solicit broad public participation from stakeholders and other interested persons in the development of the standards and the adoption of regulations pursuant to this chapter.

- (4) This chapter preserves the Legislature's authority over long-term water use efficiency target setting and ensures appropriate legislative oversight of the implementation of this chapter by doing all of the following:
  - (A) Requiring the Legislative Analyst to conduct a review of the implementation of this chapter, including compliance with the adopted standards and regulations, accuracy of the data, use of alternate data, and other issues the Legislative Analyst deems appropriate.
  - (B) Stating legislative intent that the director of the department and the chairperson of the board appear before the appropriate Senate and Assembly policy committees to report on progress in implementing this chapter.
  - (C) Providing one-time-only authority to the department and board to adopt water use efficiency standards, except as explicitly provided in this chapter. Authorization to update the standards shall require separate legislation.
- (c) It is the intent of the Legislature that the following principles apply to the development and implementation of long-term standards and urban water use objectives:
  - (1) Local urban retail water suppliers should have primary responsibility for meeting standards-based water use targets, and they shall retain the flexibility to develop their water supply portfolios, design and implement water conservation strategies, educate their customers, and enforce their rules.
  - (2) Long-term standards and urban water use objectives should advance the state's goals to mitigate and adapt to climate change.
  - (3) Long-term standards and urban water use objectives should acknowledge the shade, air quality, and heat-island reduction benefits provided to communities by trees through the support of water-efficient irrigation practices that keep trees healthy.

- (4) The state should identify opportunities for streamlined reporting, eliminate redundant data submissions, and incentivize open access to data collected by urban and agricultural water suppliers.

**10609.2.** (a) The board, in coordination with the department, shall adopt long-term standards for the efficient use of water pursuant to this chapter on or before June 30, 2022.

(b) Standards shall be adopted for all of the following:

- (1) Outdoor residential water use.
- (2) Outdoor irrigation of landscape areas with dedicated irrigation meters in connection with CII water use.
- (3) A volume for water loss.

(c) When adopting the standards under this section, the board shall consider the policies of this chapter and the proposed efficiency standards' effects on local wastewater management, developed and natural parklands, and urban tree health. The standards and potential effects shall be identified by May 30, 2022. The board shall allow for public comment on potential effects identified by the board under this subdivision.

(d) The long-term standards shall be set at a level designed so that the water use objectives, together with other demands excluded from the long-term standards such as CII indoor water use and CII outdoor water use not connected to a dedicated landscape meter, would exceed the statewide conservation targets required pursuant to Chapter 3 (commencing with Section 10608.16).

(e) The board, in coordination with the department, shall adopt by regulation variances recommended by the department pursuant to Section 10609.14 and guidelines and methodologies pertaining to the calculation of an urban retail water supplier's urban water use objective recommended by the department pursuant to Section 10609.16.

**10609.4.** (a) (1) Until January 1, 2025, the standard for indoor residential water use shall be 55 gallons per capita daily.

(2) Beginning January 1, 2025, and until January 1, 2030, the

standard for indoor residential water use shall be the greater of 52.5 gallons per capita daily or a standard recommended pursuant to subdivision (b).

(3) Beginning January 1, 2030, the standard for indoor residential water use shall be the greater of 50 gallons per capita daily or a standard recommended pursuant to subdivision (b).

(b) (1) The department, in coordination with the board, shall conduct necessary studies and investigations and may jointly recommend to the Legislature a standard for indoor residential water use that more appropriately reflects best practices for indoor residential water use than the standard described in subdivision (a). A report on the results of the studies and investigations shall be made to the chairpersons of the relevant policy committees of each house of the Legislature by January 1, 2021, and shall include information necessary to support the recommended standard, if there is one. The studies and investigations shall also include an analysis of the benefits and impacts of how the changing standard for indoor residential water use will impact water and wastewater management, including potable water usage, wastewater, recycling and reuse systems, infrastructure, operations, and supplies.

(2) The studies, investigations, and report described in paragraph (1) shall include collaboration with, and input from, a broad group of stakeholders, including, but not limited to, environmental groups, experts in indoor plumbing, and water, wastewater, and recycled water agencies.

**10609.6.** (a) (1) The department, in coordination with the board, shall conduct necessary studies and investigations and recommend, no later than October 1, 2021, standards for outdoor residential use for adoption by the board in accordance with this chapter.

(2) (A) The standards shall incorporate the principles of the model water efficient landscape ordinance adopted by the department pursuant to the Water Conservation in Landscaping Act (Article 10.8 (commencing with Section 65591) of Chapter 3 of Division 1 of Title 7 of the Government Code).

(B) The standards shall apply to irrigable lands.

- (C) The standards shall include provisions for swimming pools, spas, and other water features. Ornamental water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, shall be analyzed separately from swimming pools and spas.
- (b) The department shall, by January 1, 2021, provide each urban retail water supplier with data regarding the area of residential irrigable lands in a manner that can reasonably be applied to the standards adopted pursuant to this section.
- (c) The department shall not recommend standards pursuant to this section until it has conducted pilot projects or studies, or some combination of the two, to ensure that the data provided to local agencies are reasonably accurate for the data's intended uses, taking into consideration California's diverse landscapes and community characteristics.

**10609.8.** (a) The department, in coordination with the board, shall conduct necessary studies and investigations and recommend, no later than October 1, 2021, standards for outdoor irrigation of landscape areas with dedicated irrigation meters or other means of calculating outdoor irrigation use in connection with CII water use for adoption by the board in accordance with this chapter.

- (b) The standards shall incorporate the principles of the model water efficient landscape ordinance adopted by the department pursuant to the Water Conservation in Landscaping Act (Article 10.8 (commencing with Section 65591) of Chapter 3 of Division 1 of Title 7 of the Government Code).
- (c) The standards shall include an exclusion for water for commercial agricultural use meeting the definition of subdivision (b) of Section 51201 of the Government Code.

**10609.9.** For purposes of Sections 10609.6 and 10609.8, "principles of the model water efficient landscape ordinance" means those provisions of the model water efficient landscape ordinance applicable to the establishment or determination of the amount of water necessary to efficiently irrigate both new and existing landscapes. These provisions include, but are not limited to, all of the following:

- (a) Evapotranspiration adjustment factors, as applicable.
- (b) Landscape area.
- (c) Maximum applied water allowance.
- (d) Reference evapotranspiration.
- (e) Special landscape areas, including provisions governing evapotranspiration adjustment factors for different types of water used for irrigating the landscape.

**10609.10.** (a) The department, in coordination with the board, shall conduct necessary studies and investigations and recommend, no later than October 1, 2021, performance measures for CII water use for adoption by the board in accordance with this chapter.

- (b) Prior to recommending performance measures for CII water use, the department shall solicit broad public participation from stakeholders and other interested persons relating to all of the following:
  - (1) Recommendations for a CII water use classification system for California that address significant uses of water.
  - (2) Recommendations for setting minimum size thresholds for converting mixed CII meters to dedicated irrigation meters, and evaluation of, and recommendations for, technologies that could be used in lieu of requiring dedicated irrigation meters.
  - (3) Recommendations for CII water use best management practices, which may include, but are not limited to, water audits and water management plans for those CII customers that exceed a recommended size, volume of water use, or other threshold.
- (c) Recommendations of appropriate performance measures for CII water use shall be consistent with the October 21, 2013, report to the Legislature by the Commercial, Industrial, and Institutional Task Force entitled "Water Use Best Management Practices," including the technical and financial feasibility recommendations provided in that report, and shall support the economic productivity of California's commercial, industrial, and institutional sectors.

- (d) (1) The board, in coordination with the department, shall adopt performance measures for CII water use on or before June 30, 2022.

- (a) Each urban retail water supplier shall implement the performance measures adopted by the board pursuant to paragraph (1).

**10609.12.** The standards for water loss for urban retail water suppliers shall be the standards adopted by the board pursuant to subdivision (i) of Section 10608.34.

**10609.14.** (a) The department, in coordination with the board, shall conduct necessary studies and investigations and, no later than October 1, 2021, recommend for adoption by the board in accordance with this chapter appropriate variances for unique uses that can have a material effect on an urban retail water supplier's urban water use objective.

- (b) Appropriate variances may include, but are not limited to, allowances for the following:

- (1) Significant use of evaporative coolers.
- (2) Significant populations of horses and other livestock.
- (3) Significant fluctuations in seasonal populations.
- (4) Significant landscaped areas irrigated with recycled water having high levels of total dissolved solids.
- (5) Significant use of water for soil compaction and dust control.
- (6) Significant use of water to supplement ponds and lakes to sustain wildlife.
- (7) Significant use of water to irrigate vegetation for fire protection.
- (8) Significant use of water for commercial or noncommercial agricultural use.

- (c) The department, in recommending variances for adoption by the board, shall also recommend a threshold of significance for each recommended variance.

- (d) Before including any specific variance in calculating an urban retail water supplier's water use objective, the urban retail water supplier shall request and receive approval by the board for the inclusion of that variance.

- (e) The board shall post on its Internet Web site all of the following:

- (1) A list of all urban retail water suppliers with approved variances.
- (2) The specific variance or variances approved for each urban retail water supplier.
- (3) The data supporting approval of each variance.

**10609.15.** To help streamline water data reporting, the department and the board shall do all of the following:

- (a) Identify urban water reporting requirements shared by both agencies, and post on each agency's Internet Web site how the data is used for planning, regulatory, or other purposes.
- (b) Analyze opportunities for more efficient publication of urban water reporting requirements within each agency, and analyze how each agency can integrate various data sets in a publicly accessible location, identify priority actions, and implement priority actions identified in the analysis.
- (c) Make appropriate data pertaining to the urban water reporting requirements that are collected by either agency available to the public according to the principles and requirements of the Open and Transparent Water Data Act (Part 4.9 (commencing with Section 12400)).

**10609.16.** The department, in coordination with the board, shall conduct necessary studies and investigations and recommend, no later than October 1, 2021, guidelines and methodologies for the board to adopt that identify how an urban retail water supplier calculates its urban water use objective. The guidelines and methodologies shall address, as necessary, all of the following:

- (a) Determining the irrigable lands within the urban retail water supplier's service area.
- (b) Updating and revising methodologies described pursuant to subparagraph (A) of paragraph (1) of subdivision (h) of Section 10608.20, as appropriate, including methodologies for calculating the population in an urban retail water supplier's service area.
- (c) Using landscape area data provided by the department or alternative data.

- (d) Incorporating precipitation data and climate data into estimates of a urban retail water supplier's outdoor irrigation budget for its urban water use objective.
- (e) Estimating changes in outdoor landscape area and population, and calculating the urban water use objective, for years when updated landscape imagery is not available from the department.
- (f) Determining acceptable levels of accuracy for the supporting data, the urban water use objective, and compliance with the urban water use objective.

**10609.18.** The department and the board shall solicit broad public participation from stakeholders and other interested persons in the development of the standards and the adoption of regulations pursuant to this chapter. The board shall hold at least one public meeting before taking any action on any standard or variance recommended by the department.

**10609.20.** (a) Each urban retail water supplier shall calculate its urban water use objective no later than January 1, 2024, and by January 1 every year thereafter.

- (b) The calculation shall be based on the urban retail water supplier's water use conditions for the previous calendar or fiscal year.
- (c) Each urban water supplier's urban water use objective shall be composed of the sum of the following:
  - (1) Aggregate estimated efficient indoor residential water use.
  - (2) Aggregate estimated efficient outdoor residential water use.
  - (3) Aggregate estimated efficient outdoor irrigation of landscape areas with dedicated irrigation meters or equivalent technology in connection with CII water use.
  - (4) Aggregate estimated efficient water losses.
  - (5) Aggregate estimated water use in accordance with variances, as appropriate.
- (d) (1) An urban retail water supplier that delivers water from a groundwater basin, reservoir, or other source that is augmented by potable reuse water may adjust its urban water use objective by a bonus incentive calculated pursuant to this subdivision.

- (2) The water use objective bonus incentive shall be the volume of its potable reuse delivered to residential water users and to landscape areas with dedicated irrigation meters in connection with CII water use, on an acre-foot basis.
- (3) The bonus incentive pursuant to paragraph (1) shall be limited in accordance with one of the following:
  - (A) The bonus incentive shall not exceed 15 percent of the urban water supplier's water use objective for any potable reuse water produced at an existing facility.
  - (B) The bonus incentive shall not exceed 10 percent of the urban water supplier's water use objective for any potable reuse water produced at any facility that is not an existing facility.
- (4) For purposes of this subdivision, "existing facility" means a facility that meets all of the following:
  - (A) The facility has a certified environmental impact report, mitigated negative declaration, or negative declaration on or before January 1, 2019.
  - (B) The facility begins producing and delivering potable reuse water on or before January 1, 2022.
  - (C) The facility uses microfiltration and reverse osmosis technologies to produce the potable reuse water.
- (e) (1) The calculation of the urban water use objective shall be made using landscape area and other data provided by the department and pursuant to the standards, guidelines, and methodologies adopted by the board. The department shall provide data to the urban water supplier at a level of detail sufficient to allow the urban water supplier to verify its accuracy at the parcel level.
- (2) Notwithstanding paragraph (1), an urban retail water supplier may use alternative data in calculating the urban water use objective if the supplier demonstrates to the department that the alternative data are equivalent, or superior, in quality and accuracy to the data provided by the department. The department may provide technical assistance to an urban retail water supplier in evaluating whether the alternative data are appropriate for use in calculating the supplier's urban water use objective.

**10609.21.** (a) For purposes of Section 10609.20, and notwithstanding paragraph (4) of subdivision (d) of Section 10609.20, “existing facility” also includes the North City Project, phase one of the Pure Water San Diego Program, for which an environmental impact report was certified on April 10, 2018.

(b) This section shall become operative on January 1, 2019.

**10609.22.** (a) An urban retail water supplier shall calculate its actual urban water use no later than January 1, 2024, and by January 1 every year thereafter.

(b) The calculation shall be based on the urban retail water supplier’s water use for the previous calendar or fiscal year.

(c) Each urban water supplier’s urban water use shall be composed of the sum of the following:

- (1) Aggregate residential water use.
- (2) Aggregate outdoor irrigation of landscape areas with dedicated irrigation meters in connection with CII water use.
- (3) Aggregate water losses.

**10609.24.** (a) An urban retail water supplier shall submit a report to the department no later than January 1, 2024, and by January 1 every year thereafter. The report shall include all of the following:

- (1) The urban water use objective calculated pursuant to Section 10609.20 along with relevant supporting data.
- (2) The actual urban water use calculated pursuant to Section 10609.22 along with relevant supporting data.
- (3) Documentation of the implementation of the performance measures for CII water use.
- (4) A description of the progress made towards meeting the urban water use objective.
- (5) The validated water loss audit report conducted pursuant to Section 10608.34.

(b) The department shall post the reports and information on its internet website.

- (c) The board may issue an information order or conservation order to, or impose civil liability on, an entity or individual for failure to submit a report required by this section.

**10609.25.** As part of the first report submitted to the department by an urban retail water supplier no later than January 1, 2024, pursuant to subdivision (a) of Section 10609.24, each urban retail water supplier shall provide a narrative that describes the water demand management measures that the supplier plans to implement to achieve its urban water use objective by January 1, 2027.

**10609.26.** (a) (1) On and after January 1, 2024, the board may issue informational orders pertaining to water production, water use, and water conservation to an urban retail water supplier that does not meet its urban water use objective required by this chapter. Informational orders are intended to obtain information on supplier activities, water production, and conservation efforts in order to identify technical assistance needs and assist urban water suppliers in meeting their urban water use objectives.

- (2) In determining whether to issue an informational order, the board shall consider the degree to which the urban retail water supplier is not meeting its urban water use objective, information provided in the report required by Section 10609.24, and actions the urban retail water supplier has implemented or will implement in order to help meet the urban water use objective.

- (3) The board shall share information received pursuant to this subdivision with the department.

- (4) An urban water supplier may request technical assistance from the department. The technical assistance may, to the extent available, include guidance documents, tools, and data.

- (b) On and after January 1, 2025, the board may issue a written notice to an urban retail water supplier that does not meet its urban water use objective required by this chapter. The written notice may warn the urban retail water supplier that it is not meeting its urban water use objective described in Section 10609.20 and is not making adequate progress in meeting the urban water use objective, and may request that the urban retail water supplier

address areas of concern in its next annual report required by Section 10609.24. In deciding whether to issue a written notice, the board may consider whether the urban retail water supplier has received an informational order, the degree to which the urban retail water supplier is not meeting its urban water use objective, information provided in the report required by Section 10609.24, and actions the urban retail water supplier has implemented or will implement in order to help meet its urban water use objective.

- (c) (1) On and after January 1, 2026, the board may issue a conservation order to an urban retail water supplier that does not meet its urban water use objective. A conservation order may consist of, but is not limited to, referral to the department for technical assistance, requirements for education and outreach, requirements for local enforcement, and other efforts to assist urban retail water suppliers in meeting their urban water use objective.
  - (2) In issuing a conservation order, the board shall identify specific deficiencies in an urban retail water supplier's progress towards meeting its urban water use objective, and identify specific actions to address the deficiencies.
  - (3) The board may request that the department provide an urban retail water supplier with technical assistance to support the urban retail water supplier's actions to remedy the deficiencies.
- (d) A conservation order issued in accordance with this chapter may include requiring actions intended to increase water-use efficiency, but shall not curtail or otherwise limit the exercise of a water right, nor shall it require the imposition of civil liability pursuant to Section 377.

**10609.27.** Notwithstanding Section 10609.26, the board shall not issue an information order, written notice, or conservation order pursuant to Section 10609.26 if both of the following conditions are met:

- (a) The board determines that the urban retail water supplier is not meeting its urban water use objective solely because the volume of water loss exceeds the urban retail water supplier's standard for water loss.

- (b) Pursuant to Section 10608.34, the board is taking enforcement action against the urban retail water supplier for not meeting the performance standards for the volume of water losses.

**10609.28.** The board may issue a regulation or informational order requiring a wholesale water supplier, an urban retail water supplier, or a distributor of a public water supply, as that term is used in Section 350, to provide a monthly report relating to water production, water use, or water conservation.

**10609.30.** On or before January 10, 2024, the Legislative Analyst shall provide to the appropriate policy committees of both houses of the Legislature and the public a report evaluating the implementation of the water use efficiency standards and water use reporting pursuant to this chapter. The board and the department shall provide the Legislative Analyst with the available data to complete this report.

- (a) The report shall describe all of the following:

- (1) The rate at which urban retail water users are complying with the standards, and factors that might facilitate or impede their compliance.
- (2) The accuracy of the data and estimates being used to calculate urban water use objectives.
- (3) Indications of the economic impacts, if any, of the implementation of this chapter on urban water suppliers and urban water users, including CII water users.
- (4) The frequency of use of the bonus incentive, the volume of water associated with the bonus incentive, value to urban water suppliers of the bonus incentive, and any implications of the use of the bonus incentive on water use efficiency.
- (5) The early indications of how implementing this chapter might impact the efficiency of statewide urban water use.
- (6) Recommendations, if any, for improving statewide urban water use efficiency and the standards and practices described in this chapter.
- (7) Any other issues the Legislative Analyst deems appropriate.

**10609.32.** It is the intent of the Legislature that the chairperson of the board and the director of the department appear before the appropriate policy committees of both houses of the Legislature on or around January 1, 2026, and report on the implementation of the water use efficiency standards and water use reporting pursuant to this chapter. It is the intent of the Legislature that the topics to be covered include all of the following:

- (a) The rate at which urban retail water suppliers are complying with the standards, and factors that might facilitate or impede their compliance.
- (b) What enforcement actions have been taken, if any.
- (c) The accuracy of the data and estimates being used to calculate urban water use objectives.
- (d) Indications of the economic impacts, if any, of the implementation of this chapter on urban water suppliers and urban water users, including CII water users.
- (e) The frequency of use of the bonus incentive, the volume of water associated with the bonus incentive, value to urban water suppliers of the bonus incentive, and any implications of the use of the bonus incentive on water use efficiency.
- (f) An assessment of how implementing this chapter is affecting the efficiency of statewide urban water use.

**10609.34.** Notwithstanding Section 15300.2 of Title 14 of the California Code of Regulations, an action of the board taken under this chapter shall be deemed to be a Class 8 action, within the meaning of Section 15308 of Title 14 of the California Code of Regulations, provided that the action does not involve relaxation of existing water conservation or water use standards.

**10609.36.** (a) Nothing in this chapter shall be construed to determine or alter water rights. Sections 1010 and 1011 apply to water conserved through implementation of this chapter.

- (b) Nothing in this chapter shall be construed to authorize the board to update or revise water use efficiency standards authorized by this chapter except as explicitly provided in this chapter. Authorization to update the standards beyond that explicitly provided in this chapter shall require separate legislation.

- (c) Nothing in this chapter shall be construed to limit or otherwise affect the use of recycled water as seawater barriers for groundwater salinity management.

**10609.38.** The board may waive the requirements of this chapter for a period of up to five years for any urban retail water supplier whose water deliveries are significantly affected by changes in water use as a result of damage from a disaster such as an earthquake or fire. In establishing the period of a waiver, the board shall take into consideration the breadth of the damage and the time necessary for the damaged areas to recover from the disaster.

## **PART 2.6. URBAN WATER MANAGEMENT PLANNING**

### **CHAPTER 1. General Declaration and Policy [10610 – 10610.4]**

**10610.** This part shall be known and may be cited as the "Urban Water Management Planning Act."

**10610.2.** (a) The Legislature finds and declares all of the following:

- (1) The waters of the state are a limited and renewable resource subject to ever-increasing demands.
- (2) The conservation and efficient use of urban water supplies are of statewide concern; however, the planning for that use and the implementation of those plans can best be accomplished at the local level.
- (3) A long-term, reliable supply of water is essential to protect the productivity of California's businesses and economic climate, and increasing long-term water conservation among Californians, improving water use efficiency within the state's communities and agricultural production, and strengthening local and regional drought planning are critical to California's resilience to drought and climate change.
- (4) As part of its long-range planning activities, every urban water supplier should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry water years now and into the

foreseeable future, and every urban water supplier should collaborate closely with local land-use authorities to ensure water demand forecasts are consistent with current land-use planning.

- (5) Public health issues have been raised over a number of contaminants that have been identified in certain local and imported water supplies.
  - (6) Implementing effective water management strategies, including groundwater storage projects and recycled water projects, may require specific water quality and salinity targets for meeting groundwater basins water quality objectives and promoting beneficial use of recycled water.
  - (7) Water quality regulations are becoming an increasingly important factor in water agencies' selection of raw water sources, treatment alternatives, and modifications to existing treatment facilities.
  - (8) Changes in drinking water quality standards may also impact the usefulness of water supplies and may ultimately impact supply reliability.
  - (9) The quality of source supplies can have a significant impact on water management strategies and supply reliability.
- (b) This part is intended to provide assistance to water agencies in carrying out their long-term resource planning responsibilities to ensure adequate water supplies to meet existing and future demands for water.

**10610.4.** The Legislature finds and declares that it is the policy of the state as follows:

- (a) The management of urban water demands and efficient use of water shall be actively pursued to protect both the people of the state and their water resources.
- (b) The management of urban water demands and efficient use of urban water supplies shall be a guiding criterion in public decisions.
- (c) Urban water suppliers shall be required to develop water management plans to achieve the efficient use of available supplies and strengthen local drought planning.

**CHAPTER 2. Definitions [10611 – 10618]**

**10611.** Unless the context otherwise requires, the definitions of this chapter govern the construction of this part.

**10611.3.** "Customer" means a purchaser of water from a water supplier who uses the water for municipal purposes, including residential, commercial, governmental, and industrial uses.

**10611.5.** "Demand management" means those water conservation measures, programs, and incentives that prevent the waste of water and promote the reasonable and efficient use and reuse of available supplies.

**10612.** "Drought risk assessment" means a method that examines water shortage risks based on the driest five-year historic sequence for the agency's water supply, as described in subdivision (b) of Section 10635.

**10613.** "Efficient use" means those management measures that result in the most effective use of water so as to prevent its waste or unreasonable use or unreasonable method of use.

**10614.** "Person" means any individual, firm, association, organization, partnership, business, trust, corporation, company, public agency, or any agency of such an entity.

**10615.** "Plan" means an urban water management plan prepared pursuant to this part. A plan shall describe and evaluate sources of supply, reasonable and practical efficient uses, reclamation and demand management activities. The components of the plan may vary according to an individual community or area's characteristics and its capabilities to efficiently use and conserve water. The plan shall address measures for residential, commercial, governmental, and industrial water demand management as set forth in Article 2 (commencing with Section 10630) of Chapter 3. In addition, a strategy and time schedule for implementation shall be included in the plan.

**10616.** "Public agency" means any board, commission, county, city and county, city, regional agency, district, or other public entity.

**10616.5.** "Recycled water" means the reclamation and reuse of wastewater for beneficial use.

**10617.** "Urban water supplier" means a supplier, either publicly or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually. An urban water supplier includes a supplier or contractor for water, regardless of the basis of right, which distributes or sells for ultimate resale to customers. This part applies only to water supplied from public water systems subject to Chapter 4 (commencing with Section 116275) of Part 12 of Division 104 of the Health and Safety Code.

**10617.5.** "Water shortage contingency plan" means a document that incorporates the provisions detailed in subdivision (a) of Section 10632 and is subsequently adopted by an urban water supplier pursuant to this article.

**10618.** "Water supply and demand assessment" means a method that looks at current year and one or more dry year supplies and demands for determining water shortage risks, as described in Section 10632.1.

### **CHAPTER 3. Urban Water Management Plans**

#### **ARTICLE 1. General Provisions [10620 – 10621]**

**10620.** (a) Every urban water supplier shall prepare and adopt an urban water management plan in the manner set forth in Article 3 (commencing with Section 10640).

- (b) Every person that becomes an urban water supplier shall adopt an urban water management plan within one year after it has become an urban water supplier.
- (c) An urban water supplier indirectly providing water shall not include planning elements in its water management plan as provided in Article 2 (commencing with Section 10630) that would be applicable to urban water suppliers or public agencies directly providing water, or to their customers, without the consent of those suppliers or public agencies.
- (d) (1) An urban water supplier may satisfy the requirements of this part by participation in areawide, regional, watershed, or basinwide urban water management planning where those plans will reduce

preparation costs and contribute to the achievement of conservation, efficient water use, and improved local drought resilience.

- (2) Notwithstanding paragraph (1), each urban water supplier shall develop its own water shortage contingency plan, but an urban water supplier may incorporate, collaborate, and otherwise share information with other urban water suppliers or other governing entities participating in an areawide, regional, watershed, or basinwide urban water management plan, an agricultural management plan, or groundwater sustainability plan development.
- (3) Each urban water supplier shall coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.
- (e) The urban water supplier may prepare the plan with its own staff, by contract, or in cooperation with other governmental agencies.
- (f) An urban water supplier shall describe in the plan water management tools and options used by that entity that will maximize resources and minimize the need to import water from other regions.

**10621.** (a) Each urban water supplier shall update its plan at least once every five years on or before July 1, in years ending in six and one, incorporating updated and new information from the five years preceding each update.

- (b) Every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days before the public hearing on the plan required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan. The urban water supplier may consult with, and obtain comments from, any city or county that receives notice pursuant to this subdivision.
- (c) An urban water supplier regulated by the Public Utilities Commission shall include its most recent plan and water shortage

contingency plan as part of the supplier's general rate case filings.

- (d) The amendments to, or changes in, the plan shall be adopted and filed in the manner set forth in Article 3 (commencing with Section 10640).
- (e) Each urban water supplier shall update and submit its 2015 plan to the department by July 1, 2016.
- (f) Each urban water supplier shall update and submit its 2020 plan to the department by July 1, 2021.

## **CHAPTER 3. Urban Water Management Plans**

### **ARTICLE 2. Contents of Plans [10630 – 10634]**

**10630.** It is the intention of the Legislature, in enacting this part, to permit levels of water management planning commensurate with the numbers of customers served and the volume of water supplied, while accounting for impacts from climate change.

**10630.5.** Each plan shall include a simple lay description of how much water the agency has on a reliable basis, how much it needs for the foreseeable future, what the agency's strategy is for meeting its water needs, the challenges facing the agency, and any other information necessary to provide a general understanding of the agency's plan.

**10631.** A plan shall be adopted in accordance with this chapter that shall do all of the following:

- (a) Describe the service area of the supplier, including current and projected population, climate, and other social, economic, and demographic factors affecting the supplier's water management planning. The projected population estimates shall be based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier and shall be in five-year increments to 20 years or as far as data is available. The description shall include the current and projected land uses within the existing or anticipated service area affecting the supplier's water management planning. Urban water suppliers shall coordinate with local or regional land use authorities to determine the most appropriate land use information, including,

where appropriate, land use information obtained from local or regional land use authorities, as developed pursuant to Article 5 (commencing with Section 65300) of Chapter 3 of Division 1 of Title 7 of the Government Code.

- (b) Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a), providing supporting and related information, including all of the following:
  - (1) A detailed discussion of anticipated supply availability under a normal water year, single dry year, and droughts lasting at least five years, as well as more frequent and severe periods of drought, as described in the drought risk assessment. For each source of water supply, consider any information pertinent to the reliability analysis conducted pursuant to Section 10635, including changes in supply due to climate change.
  - (2) When multiple sources of water supply are identified, a description of the management of each supply in correlation with the other identified supplies.
  - (3) For any planned sources of water supply, a description of the measures that are being undertaken to acquire and develop those water supplies.
  - (4) If groundwater is identified as an existing or planned source of water available to the supplier, all of the following information:
    - (A) The current version of any groundwater sustainability plan or alternative adopted pursuant to Part 2.74 (commencing with Section 10720), any groundwater management plan adopted by the urban water supplier, including plans adopted pursuant to Part 2.75 (commencing with Section 10750), or any other specific authorization for groundwater management for basins underlying the urban water supplier's service area.
    - (B) A description of any groundwater basin or basins from which the urban water supplier pumps groundwater.

For basins that a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the urban water supplier has the legal right to pump under the order or decree. For a basin that has not been adjudicated, information as to whether the department has identified the basin as a high- or medium-priority basin in the most current official departmental bulletin that characterizes the condition of the groundwater basin, and a detailed description of the efforts being undertaken by the urban water supplier to coordinate with groundwater sustainability agencies or groundwater management agencies listed in subdivision (c) of Section 10723 to maintain or achieve sustainable groundwater conditions in accordance with a groundwater sustainability plan or alternative adopted pursuant to Part 2.74 (commencing with Section 10720).

- (C) A detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.
  - (D) A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the urban water supplier. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.
- (c) Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.
- (d) (1) For an urban retail water supplier, quantify, to the extent records are available, past and current water use, over the same five-year increments described in subdivision (a), and projected water use, based upon information developed pursuant to subdivision (a), identifying the uses among water use sectors,

including, but not necessarily limited to, all of the following:

- (A) Single-family residential.
  - (B) Multifamily.
  - (C) Commercial.
  - (D) Industrial.
  - (E) Institutional and governmental.
  - (F) Landscape.
  - (G) Sales to other agencies.
  - (H) Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof.
  - (I) Agricultural.
  - (J) Distribution system water loss.
- (2) The water use projections shall be in the same five-year increments described in subdivision (a).
- (3) (A) The distribution system water loss shall be quantified for each of the five years preceding the plan update, in accordance with rules adopted pursuant to Section 10608.34.
- (B) The distribution system water loss quantification shall be reported in accordance with a worksheet approved or developed by the department through a public process. The water loss quantification worksheet shall be based on the water system balance methodology developed by the American Water Works Association.
- (C) In the plan due July 1, 2021, and in each update thereafter, data shall be included to show whether the urban retail water supplier met the distribution loss standards enacted by the board pursuant to Section 10608.34.
- (4) (A) Water use projections, where available, shall display and account for the water savings estimated to result from adopted codes, standards, ordinances, or transportation and land use plans identified by the urban water supplier, as applicable to the service area.

- (B) To the extent that an urban water supplier reports the information described in subparagraph (A), an urban water supplier shall do both of the following:
    - (i) Provide citations of the various codes, standards, ordinances, or transportation and land use plans utilized in making the projections.
    - (ii) Indicate the extent that the water use projections consider savings from codes, standards, ordinances, or transportation and land use plans. Water use projections that do not account for these water savings shall be noted of that fact.
- (e) Provide a description of the supplier's water demand management measures. This description shall include all of the following:
  - (1) (A) For an urban retail water supplier, as defined in Section 10608.12, a narrative description that addresses the nature and extent of each water demand management measure implemented over the past five years. The narrative shall describe the water demand management measures that the supplier plans to implement to achieve its water use targets pursuant to Section 10608.20.
    - (B) The narrative pursuant to this paragraph shall include descriptions of the following water demand management measures:
      - (i) Water waste prevention ordinances.
      - (ii) Metering.
      - (iii) Conservation pricing.
      - (iv) Public education and outreach.
      - (v) Programs to assess and manage distribution system real loss.
      - (vi) Water conservation program coordination and staffing support.
      - (vii) Other demand management measures that have a significant impact on water use as measured in

gallons per capita per day, including innovative measures, if implemented.

- (2) For an urban wholesale water supplier, as defined in Section 10608.12, a narrative description of the items in clauses (ii), (iv), (vi), and (vii) of subparagraph (B) of paragraph (1), and a narrative description of its distribution system asset management and wholesale supplier assistance programs.
- (f) Include a description of all water supply projects and water supply programs that may be undertaken by the urban water supplier to meet the total projected water use, as established pursuant to subdivision (a) of Section 10635. The urban water supplier shall include a detailed description of expected future projects and programs that the urban water supplier may implement to increase the amount of the water supply available to the urban water supplier in normal and single-dry water years and for a period of drought lasting five consecutive water years. The description shall identify specific projects and include a description of the increase in water supply that is expected to be available from each project. The description shall include an estimate with regard to the implementation timeline for each project or program.
- (g) Describe the opportunities for development of desalinated water, including, but not limited to, ocean water, brackish water, and groundwater, as a long-term supply.
- (h) An urban water supplier that relies upon a wholesale agency for a source of water shall provide the wholesale agency with water use projections from that agency for that source of water in five-year increments to 20 years or as far as data is available. The wholesale agency shall provide information to the urban water supplier for inclusion in the urban water supplier's plan that identifies and quantifies, to the extent practicable, the existing and planned sources of water as required by subdivision (b), available from the wholesale agency to the urban water supplier over the same five-year increments, and during various water-year types in accordance with subdivision (f). An urban water supplier may rely upon water supply information provided by the wholesale agency in fulfilling the plan informational requirements of subdivisions (b) and (f).

**10631.1.** (a) The water use projections required by Section 10631 shall include projected water use for single-family and multifamily residential housing needed for lower income households, as defined in Section 50079.5 of the Health and Safety Code, as identified in the housing element of any city, county, or city and county in the service area of the supplier.

(b) It is the intent of the Legislature that the identification of projected water use for single-family and multifamily residential housing for lower income households will assist a supplier in complying with the requirement under Section 65589.7 of the Government Code to grant a priority for the provision of service to housing units affordable to lower income households.

**10631.2.** (a) In addition to the requirements of Section 10631, an urban water management plan shall include any of the following information that the urban water supplier can readily obtain:

- (1) An estimate of the amount of energy used to extract or divert water supplies.
- (2) An estimate of the amount of energy used to convey water supplies to the water treatment plants or distribution systems.
- (3) An estimate of the amount of energy used to treat water supplies.
- (4) An estimate of the amount of energy used to distribute water supplies through its distribution systems.
- (5) An estimate of the amount of energy used for treated water supplies in comparison to the amount used for nontreated water supplies.
- (6) An estimate of the amount of energy used to place water into or withdraw from storage.
- (7) Any other energy-related information the urban water supplier deems appropriate.

(b) The department shall include in its guidance for the preparation of urban water management plans a methodology for the voluntary calculation or estimation of the energy intensity of urban water systems. The department may consider studies and calculations conducted by the Public Utilities Commission in developing the methodology.

- (c) The Legislature finds and declares that energy use is only one factor in water supply planning and shall not be considered independently of other factors.

**10632.** (a) Every urban water supplier shall prepare and adopt a water shortage contingency plan as part of its urban water management plan that consists of each of the following elements:

- (1) The analysis of water supply reliability conducted pursuant to Section 10635.
- (2) The procedures used in conducting an annual water supply and demand assessment that include, at a minimum, both of the following:
  - (A) The written decision making process that an urban water supplier will use each year to determine its water supply reliability.
  - (B) The key data inputs and assessment methodology used to evaluate the urban water supplier's water supply reliability for the current year and one dry year, including all of the following:
    - (i) Current year unconstrained demand, considering weather, growth, and other influencing factors, such as policies to manage current supplies to meet demand objectives in future years, as applicable.
    - (ii) Current year available supply, considering hydrological and regulatory conditions in the current year and one dry year. The annual supply and demand assessment may consider more than one dry year solely at the discretion of the urban water supplier.
    - (iii) Existing infrastructure capabilities and plausible constraints.
    - (iv) A defined set of locally applicable evaluation criteria that are consistently relied upon for each annual water supply and demand assessment.
    - (v) A description and quantification of each source of water supply.

- (3) (A) Six standard water shortage levels corresponding to progressive ranges of up to 10, 20, 30, 40, and 50 percent shortages and greater than 50 percent shortage. Urban water suppliers shall define these shortage levels based on the suppliers' water supply conditions, including percentage reductions in water supply, changes in groundwater levels, changes in surface elevation or level of subsidence, or other changes in hydrological or other local conditions indicative of the water supply available for use. Shortage levels shall also apply to catastrophic interruption of water supplies, including, but not limited to, a regional power outage, an earthquake, and other potential emergency events.
  - (B) An urban water supplier with an existing water shortage contingency plan that uses different water shortage levels may comply with the requirement in subparagraph (A) by developing and including a cross-reference relating its existing categories to the six standard water shortage levels.
- (4) Shortage response actions that align with the defined shortage levels and include, at a minimum, all of the following:
  - (A) Locally appropriate supply augmentation actions.
  - (B) Locally appropriate demand reduction actions to adequately respond to shortages.
  - (C) Locally appropriate operational changes.
  - (D) Additional, mandatory prohibitions against specific water use practices that are in addition to state-mandated prohibitions and appropriate to the local conditions.
  - (E) For each action, an estimate of the extent to which the gap between supplies and demand will be reduced by implementation of the action.
- (5) Communication protocols and procedures to inform customers, the public, interested parties, and local, regional, and state governments, regarding, at a minimum, all of the following:

- (A) Any current or predicted shortages as determined by the annual water supply and demand assessment described pursuant to Section 10632.1.
  - (B) Any shortage response actions triggered or anticipated to be triggered by the annual water supply and demand assessment described pursuant to Section 10632.1.
  - (C) Any other relevant communications.
- (6) For an urban retail water supplier, customer compliance, enforcement, appeal, and exemption procedures for triggered shortage response actions as determined pursuant to Section 10632.2.
- (7) (A) A description of the legal authorities that empower the urban water supplier to implement and enforce its shortage response actions specified in paragraph (4) that may include, but are not limited to, statutory authorities, ordinances, resolutions, and contract provisions.
  - (A) A statement that an urban water supplier shall declare a water shortage emergency in accordance with Chapter 3 (commencing with Section 350) of Division 1.
  - (B) A statement that an urban water supplier shall coordinate with any city or county within which it provides water supply services for the possible proclamation of a local emergency, as defined in Section 8558 of the Government Code.
- (8) A description of the financial consequences of, and responses for, drought conditions, including, but not limited to, all of the following:
  - (A) A description of potential revenue reductions and expense increases associated with activated shortage response actions described in paragraph (4).
  - (B) A description of mitigation actions needed to address revenue reductions and expense increases associated with activated shortage response actions described in paragraph (4).

- (C) A description of the cost of compliance with Chapter 3.3 (commencing with Section 365) of Division 1.
- (9) For an urban retail water supplier, monitoring and reporting requirements and procedures that ensure appropriate data is collected, tracked, and analyzed for purposes of monitoring customer compliance and to meet state reporting requirements.
- (10) Reevaluation and improvement procedures for systematically monitoring and evaluating the functionality of the water shortage contingency plan in order to ensure shortage risk tolerance is adequate and appropriate water shortage mitigation strategies are implemented as needed.
- (b) For purposes of developing the water shortage contingency plan pursuant to subdivision (a), an urban water supplier shall analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas, as defined in subdivision (a) of Section 115921 of the Health and Safety Code.
- (c) The urban water supplier shall make available the water shortage contingency plan prepared pursuant to this article to its customers and any city or county within which it provides water supplies no later than 30 days after adoption of the water shortage contingency plan.

**10632.1.** An urban water supplier shall conduct an annual water supply and demand assessment pursuant to subdivision (a) of Section 10632 and, on or before July 1 of each year, submit an annual water shortage assessment report to the department with information for anticipated shortage, triggered shortage response actions, compliance and enforcement actions, and communication actions consistent with the supplier's water shortage contingency plan. An urban water supplier that relies on imported water from the State Water Project or the Bureau of Reclamation shall submit its annual water supply and demand assessment within 14 days of receiving its final allocations, or by July 1 of each year, whichever is later.

**10632.2.** An urban water supplier shall follow, where feasible and appropriate, the prescribed procedures and implement determined shortage response actions in its water shortage contingency plan, as identified in

subdivision (a) of Section 10632, or reasonable alternative actions, provided that descriptions of the alternative actions are submitted with the annual water shortage assessment report pursuant to Section 10632.1. Nothing in this section prohibits an urban water supplier from taking actions not specified in its water shortage contingency plan, if needed, without having to formally amend its urban water management plan or water shortage contingency plan.

**10632.3.** It is the intent of the Legislature that, upon proclamation by the Governor of a state of emergency under the California Emergency Services Act (Chapter 7 (commencing with Section 8550) of Division 1 of Title 2 of the Government Code) based on drought conditions, the board defer to implementation of locally adopted water shortage contingency plans to the extent practicable.

**10632.5.** (a) In addition to the requirements of paragraph (3) of subdivision (a) of Section 10632, beginning January 1, 2020, the plan shall include a seismic risk assessment and mitigation plan to assess the vulnerability of each of the various facilities of a water system and mitigate those vulnerabilities.

- (b) An urban water supplier shall update the seismic risk assessment and mitigation plan when updating its urban water management plan as required by Section 10621.
- (c) An urban water supplier may comply with this section by submitting, pursuant to Section 10644, a copy of the most recent adopted local hazard mitigation plan or multihazard mitigation plan under the federal Disaster Mitigation Act of 2000 (Public Law 106-390) if the local hazard mitigation plan or multihazard mitigation plan addresses seismic risk.

**10633.** The plan shall provide, to the extent available, information on recycled water and its potential for use as a water source in the service area of the urban water supplier. The preparation of the plan shall be coordinated with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area, and shall include all of the following:

- (a) A description of the wastewater collection and treatment systems in the supplier's service area, including a quantification of the

amount of wastewater collected and treated and the methods of wastewater disposal.

- (b) A description of the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.
- (c) A description of the recycled water currently being used in the supplier's service area, including, but not limited to, the type, place, and quantity of use.
- (d) A description and quantification of the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse, groundwater recharge, indirect potable reuse, and other appropriate uses, and a determination with regard to the technical and economic feasibility of serving those uses.
- (e) The projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected pursuant to this subdivision.
- (f) A description of actions, including financial incentives, which may be taken to encourage the use of recycled water, and the projected results of these actions in terms of acre-feet of recycled water used per year.
- (g) A plan for optimizing the use of recycled water in the supplier's service area, including actions to facilitate the installation of dual distribution systems, to promote recirculating uses, to facilitate the increased use of treated wastewater that meets recycled water standards, and to overcome any obstacles to achieving that increased use.

**10634.** The plan shall include information, to the extent practicable, relating to the quality of existing sources of water available to the supplier over the same five-year increments as described in subdivision (a) of Section 10631, and the manner in which water quality affects water management strategies and supply reliability.

**CHAPTER 3. Urban Water Management Plans****ARTICLE 2.5. Water Service Reliability [10635]**

**10635.** (a) Every urban water supplier shall include, as part of its urban water management plan, an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier with the long-term total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and a drought lasting five consecutive water years. The water service reliability assessment shall be based upon the information compiled pursuant to Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier.

(b) Every urban water supplier shall include, as part of its urban water management plan, a drought risk assessment for its water service to its customers as part of information considered in developing the demand management measures and water supply projects and programs to be included in the urban water management plan. The urban water supplier may conduct an interim update or updates to this drought risk assessment within the five-year cycle of its urban water management plan update. The drought risk assessment shall include each of the following:

- (1) A description of the data, methodology, and basis for one or more supply shortage conditions that are necessary to conduct a drought risk assessment for a drought period that lasts five consecutive water years, starting from the year following when the assessment is conducted.
- (2) A determination of the reliability of each source of supply under a variety of water shortage conditions. This may include a determination that a particular source of water supply is fully reliable under most, if not all, conditions.
- (3) A comparison of the total water supply sources available to the water supplier with the total projected water use for the drought period.
- (4) Considerations of the historical drought hydrology, plausible changes on projected supplies and demands under climate

change conditions, anticipated regulatory changes, and other locally applicable criteria.

- (d) The urban water supplier shall provide that portion of its urban water management plan prepared pursuant to this article to any city or county within which it provides water supplies no later than 60 days after the submission of its urban water management plan.
- (e) Nothing in this article is intended to create a right or entitlement to water service or any specific level of water service.
- (f) Nothing in this article is intended to change existing law concerning an urban water supplier's obligation to provide water service to its existing customers or to any potential future customers.

### **CHAPTER 3. Urban Water Management Plans**

#### **ARTICLE 3. Adoption and Implementation of Plans [10640 – 10645]**

**10640.** (a) Every urban water supplier required to prepare a plan pursuant to this part shall prepare its plan pursuant to Article 2 (commencing with Section 10630). The supplier shall likewise periodically review the plan as required by Section 10621, and any amendments or changes required as a result of that review shall be adopted pursuant to this article.

- (b) Every urban water supplier required to prepare a water shortage contingency plan shall prepare a water shortage contingency plan pursuant to Section 10632. The supplier shall likewise periodically review the water shortage contingency plan as required by paragraph (10) of subdivision (a) of Section 10632 and any amendments or changes required as a result of that review shall be adopted pursuant to this article.

**10641.** An urban water supplier required to prepare a plan or a water shortage contingency plan may consult with, and obtain comments from, any public agency or state agency or any person who has special expertise with respect to water demand management methods and techniques.

**10642.** Each urban water supplier shall encourage the active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of both the plan and the water shortage contingency plan. Prior to adopting either, the urban water supplier shall make both the plan and the water shortage contingency plan available for public inspection and shall hold a public hearing or hearings thereon. Prior to any of these hearings, notice of the time and place of the hearing shall be published within the jurisdiction of the publicly owned water supplier pursuant to Section 6066 of the Government Code. The urban water supplier shall provide notice of the time and place of a hearing to any city or county within which the supplier provides water supplies. Notices by a local public agency pursuant to this section shall be provided pursuant to Chapter 17.5 (commencing with Section 7290) of Division 7 of Title 1 of the Government Code. A privately owned water supplier shall provide an equivalent notice within its service area. After the hearing or hearings, the plan or water shortage contingency plan shall be adopted as prepared or as modified after the hearing or hearings.

**10643.** An urban water supplier shall implement its plan adopted pursuant to this chapter in accordance with the schedule set forth in its plan.

**10644.** (a) (1) An urban water supplier shall submit to the department, the California State Library, and any city or county within which the supplier provides water supplies a copy of its plan no later than 30 days after adoption. Copies of amendments or changes to the plans shall be submitted to the department, the California State Library, and any city or county within which the supplier provides water supplies within 30 days after adoption.

(2) The plan, or amendments to the plan, submitted to the department pursuant to paragraph (1) shall be submitted electronically and shall include any standardized forms, tables, or displays specified by the department.

(b) If an urban water supplier revises its water shortage contingency plan, the supplier shall submit to the department a copy of its

water shortage contingency plan prepared pursuant to subdivision (a) of Section 10632 no later than 30 days after adoption, in accordance with protocols for submission and using electronic reporting tools developed by the department.

- (c) (1) (A) Notwithstanding Section 10231.5 of the Government Code, the department shall prepare and submit to the Legislature, on or before July 1, in the years ending in seven and two, a report summarizing the status of the plans and water shortage contingency plans adopted pursuant to this part. The report prepared by the department shall identify the exemplary elements of the individual plans and water shortage contingency plans. The department shall provide a copy of the report to each urban water supplier that has submitted its plan and water shortage contingency plan to the department. The department shall also prepare reports and provide data for any legislative hearings designed to consider the effectiveness of plans and water shortage contingency plans submitted pursuant to this part.

(B) The department shall prepare and submit to the board, on or before September 30 of each year, a report summarizing the submitted water supply and demand assessment results along with appropriate reported water shortage conditions and the regional and statewide analysis of water supply conditions developed by the department. As part of the report, the department shall provide a summary and, as appropriate, urban water supplier specific information regarding various shortage response actions implemented as a result of annual supplier-specific water supply and demand assessments performed pursuant to Section 10632.1.

(C) The department shall submit the report to the Legislature for the 2015 plans by July 1, 2017, and the report to the Legislature for the 2020 plans and water shortage contingency plans by July 1, 2022.

- (2) A report to be submitted pursuant to subparagraph (A) of paragraph (1) shall be submitted in compliance with Section 9795 of the Government Code.

- (d) The department shall make available to the public the standard the department will use to identify exemplary water demand management measures.

**10645.** (a) Not later than 30 days after filing a copy of its plan with the department, the urban water supplier and the department shall make the plan available for public review during normal business hours.

- (b) Not later than 30 days after filing a copy of its water shortage contingency plan with the department, the urban water supplier and the department shall make the plan available for public review during normal business hours.

#### **CHAPTER 4. Miscellaneous Provisions [10650 – 10657]**

**10650.** Any actions or proceedings, other than actions by the board, to attack, review, set aside, void, or annul the acts or decisions of an urban water supplier on the grounds of noncompliance with this part shall be commenced as follows:

- (a) An action or proceeding alleging failure to adopt a plan or a water shortage contingency plan shall be commenced within 18 months after that adoption is required by this part.
- (b) Any action or proceeding alleging that a plan or water shortage contingency plan, or action taken pursuant to either, does not comply with this part shall be commenced within 90 days after filing of the plan or water shortage contingency plan or an amendment to either pursuant to Section 10644 or the taking of that action.

**10651.** In any action or proceeding to attack, review, set aside, void, or annul a plan or a water shortage contingency plan, or an action taken pursuant to either by an urban water supplier on the grounds of noncompliance with this part, the inquiry shall extend only to whether there was a prejudicial abuse of discretion. Abuse of discretion is established if the supplier has not proceeded in a manner required by law or if the action by the water supplier is not supported by substantial evidence.

**10652.** The California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code) does not apply to the

preparation and adoption of plans pursuant to this part or to the implementation of actions taken pursuant to Section 10632. Nothing in this part shall be interpreted as exempting from the California Environmental Quality Act any project that would significantly affect water supplies for fish and wildlife, or any project for implementation of the plan, other than projects implementing Section 10632, or any project for expanded or additional water supplies.

**10653.** The adoption of a plan shall satisfy any requirements of state law, regulation, or order, including those of the board and the Public Utilities Commission, for the preparation of water management plans, water shortage contingency plans, or conservation plans; provided, that if the board or the Public Utilities Commission requires additional information concerning water conservation, drought response measures, or financial conditions to implement its existing authority, nothing in this part shall be deemed to limit the board or the commission in obtaining that information. The requirements of this part shall be satisfied by any urban water demand management plan that complies with analogous federal laws or regulations after the effective date of this part, and which substantially meets the requirements of this part, or by any existing urban water management plan which includes the contents of a plan required under this part.

**10654.** An urban water supplier may recover in its rates the costs incurred in preparing its urban water management plan, its drought risk assessment, its water supply and demand assessment, and its water shortage contingency plan and implementing the reasonable water conservation measures included in either of the plans.

**10655.** If any provision of this part or the application thereof to any person or circumstances is held invalid, that invalidity shall not affect other provisions or applications of this part which can be given effect without the invalid provision or application thereof, and to this end the provisions of this part are severable.

**10656.** An urban water supplier is not eligible for a water grant or loan awarded or administered by the state unless the urban water supplier complies with this part.

**10657.** The department may adopt regulations regarding the definitions of water, water use, and reporting periods, and may adopt any other regulations deemed necessary or desirable to implement this part. In developing regulations pursuant to this section, the department shall solicit broad public participation from stakeholders and other interested persons.



## **Appendix D: Dept. of Water Resources UWMP Checklist**

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**City of Huntington Park 2020 Urban Water Management Plan**

Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (Optional Column for Agency Review Use)
x	x	Chapter 1	10615	A plan shall describe and evaluate sources of supply, reasonable and practical efficient uses, reclamation and demand management activities.	Introduction and Overview	<a href="#">Sections 1.3 to 1.5, 3.1, 4.1, 6.1, and 9.1</a>
x	x	Chapter 1	10630.5	Each plan shall include a simple description of the supplier's plan including water availability, future requirements, a strategy for meeting needs, and other pertinent information. Additionally, a supplier may also choose to include a simple description at the beginning of each chapter.	Summary	<a href="#">Sections 2.1, 3.1, 4.1, 5.1, 6.1, 7.1, 8.1, and 9.1</a>
x	x	Section 2.2	10620(b)	Every person that becomes an urban water supplier shall adopt an urban water management plan within one year after it has become an urban water supplier.	Plan Preparation	<a href="#">Section 1.1 Appendix A</a>
x	x	Section 2.6	10620(d)(2)	Coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.	Plan Preparation	<a href="#">Section 1.2 Appendix K</a>
x	x	Section 2.6.2	10642	Provide supporting documentation that the water supplier has encouraged active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan and contingency plan.	Plan Preparation	<a href="#">Section 1.2 Appendix K</a>
x		Section 2.6, Section 6.1	10631(h)	Retail suppliers will include documentation that they have provided their wholesale supplier(s) - if any - with water use projections from that source.	System Supplies	<a href="#">Section 1.2, Appendix K</a>
	x	Section 2.6	10631(h)	Wholesale suppliers will include documentation that they have provided their urban water suppliers with identification and quantification of the existing and planned sources of water available from the wholesale to the urban supplier during various water year types.	System Supplies	<a href="#">Sections 1.2, 7.6 to 7.7, and Appendix L</a>
x	x	Section 3.1	10631(a)	Describe the water supplier service area.	System Description	<a href="#">Section 2</a>
x	x	Section 3.3	10631(a)	Describe the climate of the service area of the supplier.	System Description	<a href="#">Sections 2.4 to 2.4.1 and 6.4</a>
x	x	Section 3.4	10631(a)	Provide population projections for 2025, 2030, 2035, 2040 and optionally 2045.	System Description	<a href="#">Section 2.5.1</a>
x	x	Section 3.4.2	10631(a)	Describe other social, economic, and demographic factors affecting the supplier's water management planning.	System Description	<a href="#">Sections 2.3 to 2.3.2, 6.3, and 6.5 to 6.8</a>
x	x	Sections 3.4 and 5.4	10631(a)	Indicate the current population of the service area.	System Description and Baselines and Targets	<a href="#">Section 2.5</a>
x	x	Section 3.5	10631(a)	Describe the land uses within the service area.	System Description	<a href="#">Sections 2.3 to 2.3.2, 6.3, and 6.5 to 6.6.2</a>
x	x	Section 4.2	10631(d)(1)	Quantify past, current, and projected water use, identifying the uses among water use sectors.	System Water Use	<a href="#">Sections 6.1 to 6.3, 6.5 to 6.6.2, and 6.8 to 6.8.3</a>
x	x	Section 4.2.4	10631(d)(3)(C)	Retail suppliers shall provide data to show the distribution loss standards were met.	System Water Use	<a href="#">Sections 6.5 to 6.8, 9.2 to 9.6, and Appendix G</a>
x	x	Section 4.2.6	10631(d)(4)(A)	In projected water use, include estimates of water savings from adopted codes, plans and other policies or laws.	System Water Use	<a href="#">Section 3.5, 4.2.1, 4.3.1, 6.8 to 6.8.3, 7.6 to 7.7, and 9.2 to 9.3</a>
x	x	Section 4.2.6	10631(d)(4)(B)	Provide citations of codes, standards, ordinances, or plans used to make water use projections.	System Water Use	<a href="#">Section 3.5, 4.2.1, 4.3.1, 6.8 to 6.8.3, 7.6 to 7.7, and 9.2 to 9.3</a>
x	optional	Section 4.3.2.4	10631(d)(3)(A)	Report the distribution system water loss for each of the 5 years preceding the plan update.	System Water Use	<a href="#">Sections 6.6.2, Section 9, Appendix G</a>
x	optional	Section 4.4	10631.1(a)	Include projected water use needed for lower income housing projected in the service area of the supplier.	System Water Use	<a href="#">Section 6.8.2</a>
x	x	Section 4.5	10635(b)	Demands under climate change considerations must be included as part of the drought risk assessment.	System Water Use	<a href="#">Sections 2.4.1, 6.4, and 7.6.1</a>
x		Chapter 5	10608.20(e)	Retail suppliers shall provide baseline daily per capita water use, urban water use target, interim urban water use target, and compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data.	Baselines and Targets	<a href="#">Sections 6.6.2 to 6.7.3</a>
x		Chapter 5	10608.24(a)	Retail suppliers shall meet their water use target by December 31, 2020.	Baselines and Targets	<a href="#">Sections 6.5.2 and 6.7.3</a>
	x	Section 5.1	10608.36	Wholesale suppliers shall include an assessment of present and proposed future measures, programs, and policies to help their retail water suppliers achieve targeted water use reductions.	Baselines and Targets	<a href="#">Sections 6.5.2, 6.7.3, and 9.2 to 9.6</a>
x		Section 5.2	10608.24(d)(2)	If the retail supplier adjusts its compliance GPCD using weather normalization, economic adjustment, or extraordinary events, it shall provide the basis for, and data supporting the adjustment.	Baselines and Targets	<a href="#">Sections 6.7.3</a>
x		Section 5.5	10608.22	Retail suppliers' per capita daily water use reduction shall be no less than 5 percent of base daily per capita water use of the 5 year baseline. This does not apply if the suppliers base GPCD is at or below 100.	Baselines and Targets	<a href="#">Sections 3.5, 4.2.1, 4.3.2, 6.8.1 to 6.8.3, 7.6 to 7.7, and 9.2 to 9.3</a>
x		Section 5.5 and Appendix E	10608.4	Retail suppliers shall report on their compliance in meeting their water use targets. The data shall be reported using a standardized form in the SBX7-7 2020 Compliance Form.	Baselines and Targets	<a href="#">Sections 6.5.2 and 6.7.3, Appendix F</a>
x	x	Sections 6.1 and 6.2	10631(b)(1)	Provide a discussion of anticipated supply availability under a normal, single dry year, and a drought lasting five years, as well as more frequent and severe periods of drought.	System Supplies	<a href="#">Sections 2.4.1, 6.4, and 7.6 to 7.7</a>
x	x	Sections 6.1	10631(b)(1)	Provide a discussion of anticipated supply availability under a normal, single dry year, and a drought lasting five years, as well as more frequent and severe periods of drought, <i>including changes in supply due to climate change</i> .	System Supplies	<a href="#">Sections 2.4.1, 6.4, and 7.6 to 7.7</a>
x	x	Section 6.1	10631(b)(2)	When multiple sources of water supply are identified, describe the management of each supply in relationship to other identified supplies.	System Supplies	<a href="#">Sections 3.1 to 3.4.2</a>
x	x	Section 6.1.1	10631(b)(3)	Describe measures taken to acquire and develop planned sources of water.	System Supplies	<a href="#">Entire Section 3</a>

x	x	Section 6.2.8	10631(b)	Identify and quantify the existing and planned sources of water available for 2020, 2025, 2030, 2035, 2040 and optionally 2045.	System Supplies	<a href="#">Sections 3.5</a>
x	x	Section 6.2	10631(b)	Indicate whether groundwater is an existing or planned source of water available to the supplier.	System Supplies	<a href="#">Sections 3.4 to 3.5</a>
x	x	Section 6.2.2	10631(b)(4)(A)	Indicate whether a groundwater sustainability plan or groundwater management plan has been adopted by the water supplier or if there is any other specific authorization for groundwater management. Include a copy of the plan or authorization.	System Supplies	<a href="#">Sections 2.2, 2.6.3, 3.4 to 3.4.2, 6.4.1, and 7.9.3</a>
x	x	Section 6.2.2	10631(b)(4)(B)	Describe the groundwater basin.	System Supplies	<a href="#">Sections 2.6.3 and 3.4 to 3.4.2</a>
x	x	Section 6.2.2	10631(b)(4)(B)	Indicate if the basin has been adjudicated and include a copy of the court order or decree and a description of the amount of water the supplier has the legal right to pump.	System Supplies	<a href="#">Sections 3.4 to 3.4.2</a>
x	x	Section 6.2.2.1	10631(b)(4)(B)	For unadjudicated basins, indicate whether or not the department has identified the basin as a high or medium priority. Describe efforts by the supplier to coordinate with sustainability or groundwater agencies to achieve sustainable groundwater conditions.	System Supplies	<a href="#">Sections 3.4 to 3.4.2</a>
x	x	Section 6.2.2.4	10631(b)(4)(C)	Provide a detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years	System Supplies	<a href="#">Sections 3.4 to 3.4.2</a>
x	x	Section 6.2.2	10631(b)(4)(D)	Provide a detailed description and analysis of the amount and location of groundwater that is projected to be pumped.	System Supplies	<a href="#">Sections 2.7.2, 3.5</a>
x	x	Section 6.2.7	10631(c)	Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.	System Supplies	<a href="#">Section 2.6.7 and 3.7 to 3.7.2</a>
x	x	Section 6.2.5	10633(b)	Describe the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.	System Supplies (Recycled Water)	<a href="#">Sections 4.1 to 4.3</a>
x	x	Section 6.2.5	10633(c)	Describe the recycled water currently being used in the supplier's service area.	System Supplies (Recycled Water)	<a href="#">Sections 4.3</a>
x	x	Section 6.2.5	10633(d)	Describe and quantify the potential uses of recycled water and provide a determination of the technical and economic feasibility of those uses.	System Supplies (Recycled Water)	<a href="#">Sections 4.3.1 to 4.4</a>
x	x	Section 6.2.5	10633(e)	Describe the projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected.	System Supplies (Recycled Water)	<a href="#">Sections 4.3.1 to 4.4</a>
x	x	Section 6.2.5	10633(f)	Describe the actions which may be taken to encourage the use of recycled water and the projected results of these actions in terms of acre-feet of recycled water used per year.	System Supplies (Recycled Water)	<a href="#">Sections 4.3.1 to 4.5</a>
x	x	Section 6.2.5	10633(g)	Provide a plan for optimizing the use of recycled water in the supplier's service area.	System Supplies (Recycled Water)	<a href="#">Sections 4.3.1 to 4.5</a>
x	x	Section 6.2.6	10631(g)	Describe desalinated water project opportunities for long-term supply.	System Supplies	<a href="#">N/A</a>
x	x	Section 6.2.5	10633(a)	Describe the wastewater collection and treatment systems in the supplier's service area with quantified amount of collection and treatment and the disposal methods.	System Supplies (Recycled Water)	<a href="#">Sections 4.1 to 4.2.1</a>
x	x	Section 6.2.8, Section 6.3.7	10631(f)	Describe the expected future water supply projects and programs that may be undertaken by the water supplier to address water supply reliability in average, single-dry, and for a period of drought lasting 5 consecutive water years.	System Supplies	<a href="#">Sections 2.4.1, 3.3 to 3.4.2, 6.4, and 7.6 to 7.7</a>
x	x	Section 6.4 and Appendix O	10631.2(a)	The UWMP must include energy information, as stated in the code, that a supplier can readily obtain.	System Suppliers, Energy Intensity	<a href="#">Section 3.9</a>
x	x	Section 7.2	10634	Provide information on the quality of existing sources of water available to the supplier and the manner in which water quality affects water management strategies and supply reliability	Water Supply Reliability Assessment	<a href="#">Entire Section 5</a>
x	x	Section 7.2.4	10620(f)	Describe water management tools and options to maximize resources and minimize the need to import water from other regions.	Water Supply Reliability Assessment	<a href="#">Section 3.4 to 3.8, Section 8, Section 9</a>
x	x	Section 7.3	10635(a)	Service Reliability Assessment: Assess the water supply reliability during normal, dry, and a drought lasting five consecutive water years by comparing the total water supply sources available to the water supplier with the total projected water use over the next 20 years.	Water Supply Reliability Assessment	<a href="#">Sections 2.4.1, 6.4, and 7.6 to 7.7</a>
x	x	Section 7.3	10635(b)	Provide a drought risk assessment as part of information considered in developing the demand management measures and water supply projects.	Water Supply Reliability Assessment	<a href="#">Sections 2.4.1, 3.3 to 3.5, 6.4, 7.6 to 7.7, and entire Section 8.</a>
x	x	Section 7.3	10635(b)(1)	Include a description of the data, methodology, and basis for one or more supply shortage conditions that are necessary to conduct a drought risk assessment for a drought period that lasts 5 consecutive years.	Water Supply Reliability Assessment	<a href="#">Sections 2.4.1, 3.3 to 3.5, 6.4, and entire Section 7.</a>
x	x	Section 7.3	10635(b)(2)	Include a determination of the reliability of each source of supply under a variety of water shortage conditions.	Water Supply Reliability Assessment	<a href="#">Sections 2.4.1, 3.2 to 3.5, 6.4, and entire Section 7.</a>
x	x	Section 7.3	10635(b)(3)	Include a comparison of the total water supply sources available to the water supplier with the total projected water use for the drought period.	Water Supply Reliability Assessment	<a href="#">Sections 2.4.1, 3.2 to 3.5, 6.4, and 7.6 to 7.7</a>
x	x	Section 7.3	10635(b)(4)	Include considerations of the historical drought hydrology, plausible changes on projected supplies and demands under climate change conditions, anticipated regulatory changes, and other locally applicable criteria.	Water Supply Reliability Assessment	<a href="#">Sections 2.5, 3.4 to 3.4.2, 6.4, 6.5, 6.8, 7.1 to 7.5, 7.6 to 7.7, 8</a>
x	x	Chapter 8	10632(a)	Provide a water shortage contingency plan (WSCP) with specified elements below.	Water Shortage Contingency Planning	<a href="#">Sections 5.4.2 and entire Section 8</a>
x	x	Chapter 8	10632(a)(1)	Provide the analysis of water supply reliability (from Chapter 7 of Guidebook) in the WSCP	Water Shortage Contingency Planning	<a href="#">Entire Section 7 and Section 8.4</a>
x	x	Section 8.10	10632(a)(10)	Describe reevaluation and improvement procedures for monitoring and evaluation the water shortage contingency plan to ensure risk tolerance is adequate and appropriate water shortage mitigation strategies are implemented.	Water Shortage Contingency Planning	<a href="#">Section 8.12</a>

x	x	Section 8.2	10632(a)(2)(A)	Provide the written decision-making process and other methods that the supplier will use each year to determine its water reliability.	Water Shortage Contingency Planning	Section 8.4, Section 8.5
x	x	Section 8.2	10632(a)(2)(B)	Provide data and methodology to evaluate the supplier's water reliability for the current year and one dry year pursuant to factors in the code.	Water Shortage Contingency Planning	Section 7.4, Section 7.6, Section 8.4, and Section 8.5
x	x	Section 8.3	10632(a)(3)(A)	Define six standard water shortage levels of 10, 20, 30, 40, 50 percent shortage and greater than 50 percent shortage. These levels shall be based on supply conditions, including percent reductions in supply, changes in groundwater levels, changes in surface elevation, or other conditions. The shortage levels shall also apply to a catastrophic interruption of supply.	Water Shortage Contingency Planning	Section 8.7.2, Table 8.6 and 8.7
x	x	Section 8.3	10632(a)(3)(B)	Suppliers with an existing water shortage contingency plan that uses different water shortage levels must cross reference their categories with the six standard categories.	Water Shortage Contingency Planning	N/A
x	x	Section 8.4	10632(a)(4)(A)	Suppliers with water shortage contingency plans that align with the defined shortage levels must specify locally appropriate supply augmentation actions.	Water Shortage Contingency Planning	Section 3.6 to 3.8, Section 7.7 to 7.8, Section 8.6 to 8.8, Table 8.6 & 8.7
x	x	Section 8.4	10632(a)(4)(B)	Specify locally appropriate demand reduction actions to adequately respond to shortages.	Water Shortage Contingency Planning	Section 8.7, Section 8.8, and Table 8.6
x	x	Section 8.4	10632(a)(4)(C)	Specify locally appropriate operational changes.	Water Shortage Contingency Planning	Section 8.7, Section 8.8, and Table 8.7
x	x	Section 8.4	10632(a)(4)(D)	Specify additional mandatory prohibitions against specific water use practices that are in addition to state-mandated prohibitions are appropriate to local conditions.	Water Shortage Contingency Planning	Section 8.7, Section 8.8, and Table 8.6
x	x	Section 8.4	10632(a)(4)(E)	Estimate the extent to which the gap between supplies and demand will be reduced by implementation of the action.	Water Shortage Contingency Planning	Section 8.7, Section 8.8, and Table 8.6 and 8.7
x	x	Section 8.4.6	10632.5	The plan shall include a seismic risk assessment and mitigation plan.	Water Shortage Contingency Plan	Section 8.8 and Appendix N
x	x	Section 8.5	10632(a)(5)(A)	Suppliers must describe that they will inform customers, the public and others regarding any current or predicted water shortages.	Water Shortage Contingency Planning	Section 8.7
x	x	Section 8.5 and 8.6	10632(a)(5)(B) 10632(a)(5)(C)	Suppliers must describe that they will inform customers, the public and others regarding any shortage response actions triggered or anticipated to be triggered and other relevant communications.	Water Shortage Contingency Planning	Section 8.7
x		Section 8.6	10632(a)(6)	Retail supplier must describe how it will ensure compliance with and enforce provisions of the WSCP.	Water Shortage Contingency Planning	Section 8.7 and 8.9
x		Section 8.7	10632(a)(7)(A)	Describe the legal authority that empowers the supplier to enforce shortage response actions.	Water Shortage Contingency Planning	Section 8.1, 8.3, 8.7, and 8.12
x	x	Section 8.7	10632(a)(7)(B)	Provide a statement that the supplier will declare a water shortage emergency Water Code Chapter 3.	Water Shortage Contingency Planning	Section 8.7 and 8.12
x	x	Section 8.7	10632(a)(7)(C)	Provide a statement that the supplier will coordinate with any city or county within which it provides water for the possible proclamation of a local emergency.	Water Shortage Contingency Planning	Section 8.6 and 8.8
x	x	Section 8.8	10632(a)(8)(A)	Describe the potential revenue reductions and expense increases associated with activated shortage response actions.	Water Shortage Contingency Planning	Section 8.10
x	x	Section 8.8	10632(a)(8)(B)	Provide a description of mitigation actions needed to address revenue reductions and expense increases associated with activated shortage response actions.	Water Shortage Contingency Planning	Section 8.10
x		Section 8.8	10632(a)(8)(C)	Retail suppliers must describe the cost of compliance with Water Code Chapter 3.3: Excessive Residential Water Use During Drought	Water Shortage Contingency Planning	Section 8.7, 8.9, 8.10
x		Section 8.9	10632(a)(9)	Retail suppliers must describe the monitoring and reporting requirements and procedures that ensure appropriate data is collected, tracked, and analyzed for purposes of monitoring customer compliance.	Water Shortage Contingency Planning	Section 8.9
x		Section 8.11	10632(b)	Analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas.	Water Shortage Contingency Planning	Section 8.7, Table 8.6
x	x	Sections 8.12 and 10.4	10635(c)	Provide supporting documentation that Water Shortage Contingency Plan has been, or will be, provided to any city or county within which it provides water, no later than 30 days after the submission of the plan to DWR.	Plan Adoption, Submittal, and Implementation	Section 1.2, Section 8.12, and Appendix O
x	x	Section 8.12	10632(c)	Make available the Water Shortage Contingency Plan to customers and any city or county where it provides water within 30 after adopted the plan.	Water Shortage Contingency Planning	Section 1.2, Section 8.12, and Appendix O
	x	Sections 9.1 and 9.3	10631(e)(2)	Wholesale suppliers shall describe specific demand management measures listed in code, their distribution system asset management program, and supplier assistance program.	Demand Management Measures	N/A - City is Retail
x		Sections 9.2 and 9.3	10631(e)(1)	Retail suppliers shall provide a description of the nature and extent of each demand management measure implemented over the past five years. The description will address specific measures listed in code.	Demand Management Measures	Entire Section 9 and Appendix G
x		Chapter 10	10608.26(a)	Retail suppliers shall conduct a public hearing to discuss adoption, implementation, and economic impact of water use targets (recommended to discuss compliance).	Plan Adoption, Submittal, and Implementation	Section 1.2, Appendices A, B, and K
x	x	Section 10.2.1	10621(b)	Notify, at least 60 days prior to the public hearing, any city or county within which the supplier provides water that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan. Reported in Table 10-1.	Plan Adoption, Submittal, and Implementation	Section 1.2, Appendices A, B, and K
x	x	Section 10.4	10621(f)	Each urban water supplier shall update and submit its 2020 plan to the department by July 1, 2021.	Plan Adoption, Submittal, and Implementation	Section 1.1, 1.2, Appendices A, B, and O
x	x	Sections 10.2.2, 10.3, and 10.5	10642	Provide supporting documentation that the urban water supplier made the plan and contingency plan available for public inspection, published notice of the public hearing, and held a public hearing about the plan and contingency plan.	Plan Adoption, Submittal, and Implementation	Section 1.2, Appendices A, B, and K

x	x	Section 10.2.2	10642	The water supplier is to provide the time and place of the hearing to any city or county within which the supplier provides water.	Plan Adoption, Submittal, and Implementation	<a href="#">Section 1.2, Appendices A, B, and K</a>
x	x	Section 10.3.2	10642	Provide supporting documentation that the plan and contingency plan has been adopted as prepared or modified.	Plan Adoption, Submittal, and Implementation	<a href="#">Section 1.2, Appendices A, B, and K</a>
x	x	Section 10.4	10644(a)	Provide supporting documentation that the urban water supplier has submitted this UWMP to the California State Library.	Plan Adoption, Submittal, and Implementation	<a href="#">Section 1.1, 1.2, and Appendix O</a>
x	x	Section 10.4	10644(a)(1)	Provide supporting documentation that the urban water supplier has submitted this UWMP to any city or county within which the supplier provides water no later than 30 days after adoption.	Plan Adoption, Submittal, and Implementation	<a href="#">Section 1.1, 1.2, and Appendix O</a>
x	x	Sections 10.4.1 and 10.4.2	10644(a)(2)	The plan, or amendments to the plan, submitted to the department shall be submitted electronically.	Plan Adoption, Submittal, and Implementation	<a href="#">Section 1.1, 1.2, and Appendix O</a>
x	x	Section 10.5	10645(a)	Provide supporting documentation that, not later than 30 days after filing a copy of its plan with the department, the supplier has or will make the plan available for public review during normal business hours.	Plan Adoption, Submittal, and Implementation	<a href="#">Section 1.1, 1.2, and Appendix O</a>
x	x	Section 10.5	10645(b)	Provide supporting documentation that, not later than 30 days after filing a copy of its water shortage contingency plan with the department, the supplier has or will make the plan available for public review during normal business hours.	Plan Adoption, Submittal, and Implementation	<a href="#">Section 1.1, 1.2, and Appendix O</a>
x	x	Section 10.6	10621(c)	If supplier is regulated by the Public Utilities Commission, include its plan and contingency plan as part of its general rate case filings.	Plan Adoption, Submittal, and Implementation	<a href="#">N/A</a>
x	x	Section 10.7.2	10644(b)	If revised, submit a copy of the water shortage contingency plan to DWR within 30 days of adoption.	Plan Adoption, Submittal, and Implementation	<a href="#">TBD</a>



## **Appendix E: Dept. of Water Resources UWMP Data Tables**

**City of Huntington Park 2020 Urban Water Management Plan**

DRAFT Submittal Table 2-1 Retail Only: Public Water Systems			
Public Water System Number	Public Water System Name	Number of Municipal Connections 2020	Volume of Water Supplied 2020
CA1910049	City of Huntington Park	6,650	4,357
<b>TOTAL</b>		<b>6,650</b>	<b>4,357</b>
NOTES: Number of Municipal Connections 2020 taken from Central Basin Invoices.			

DRAFT Submittal Table 2-2: Plan Identification		
Select Only One	Type of Plan	Name of RUWMP or Regional Alliance <i>if applicable</i> <i>drop down list</i>
<input checked="" type="checkbox"/>	<b>Individual UWMP</b>	
	<input type="checkbox"/> Water Supplier is also a member of a RUWMP	
	<input type="checkbox"/> Water Supplier is also a member of a Regional Alliance	
<input type="checkbox"/>	<b>Regional Urban Water Management Plan (RUWMP)</b>	
NOTES: The City coordinates with the Central Basin Municipal Water District and elects a representative to serve a four-year term on the Board of Directors.		

DRAFT Submittal Table 2-3: Supplier Identification	
Type of Supplier (select one or both)	
<input type="checkbox"/>	Supplier is a wholesaler
<input checked="" type="checkbox"/>	Supplier is a retailer
Fiscal or Calendar Year (select one)	
<input checked="" type="checkbox"/>	UWMP Tables are in calendar years
<input type="checkbox"/>	UWMP Tables are in fiscal years
If using fiscal years provide month and date that the fiscal year begins (mm/dd)	
Units of measure used in UWMP (select from drop down)	
Unit	AF
NOTES:	

DRAFT Submittal Table 2-4 Retail: Water Supplier Information Exchange
The retail Supplier has informed the following wholesale supplier(s) of projected water use in accordance with Water Code Section 10631.
Wholesale Water Supplier Name <i>(Add additional rows as needed)</i>
Central Basin Municipal Water District
NOTES: The City has one (1) imported connection to the Central Basin with a capacity of about 7,200 AFY. The City also has seven (7) emergency connections including to the City of Vernon, City of South Gate, Maywood Mutual Water Company, Walnut Park Mutual Water Company, Southern California Water Company, and Tract 349 Mutual Water Company.

**DRAFT Submittal Table 3-1 Retail: Population - Current and Projected**

Population Served	2020	2025	2030	2035	2040	2045(opt)
	56,539	57,209	57,879	58,549	59,219	59,889

NOTES: Service area covers approximately 95% of the City limits. 2020 Numbers Based on the CA Dept. of Finance Estimates. Due to decrease in growth since 2016, used growth rate from 2010 to 2020 (about 0.24% since 2010). This growth rate is similar to that determined by SCAG estimates (about 0.27% from 2016 to 2045).

**DRAFT Submittal Table 4-1 Retail: Demands for Potable and Non-Potable Water - Actual**

Use Type (Add additional rows as needed)	2020 Actual		
<b>Drop down list</b> <i>May select each use multiple times These are the only Use Types that will be recognized by the WUEdata online submittal tool</i>	Additional Description (as needed)	Level of Treatment When Delivered <i>Drop down list</i>	Volume
Single Family		Drinking Water	881
Multi-Family		Drinking Water	2,135
Commercial		Drinking Water	979
Industrial			
Institutional/Governmental	Includes Schools	Drinking Water	76
Landscape			
Groundwater recharge			
Saline water intrusion barrier			
Agricultural irrigation			
Wetlands or wildlife habitat			
Sales/Transfers/Exchanges to other agencies			
Losses			286
Other			
<b>TOTAL</b>			<b>4,357</b>

NOTES:



DRAFT Submittal Table 4-4 Retail: 12 Month Water Loss Audit Reporting	
Reporting Period Start Date (mm/yyyy)	Volume of Water Loss*
01/2020	286
* Taken from the field "Water Losses" (a combination of apparent losses and real losses) from the AWWA worksheet.	
NOTES: 2020 Value calculated from difference between Total Water Use and Total Water Supplied into the City's System.	

DRAFT Submittal Table 4-5 Retail Only: Inclusion in Water Use Projections	
Are Future Water Savings Included in Projections? (Refer to Appendix K of UWMP Guidebook) <i>Drop down list (y/n)</i>	Yes
If "Yes" to above, state the section or page number, in the cell to the right, where citations of the codes, ordinances, etc... utilized in demand projections are found.	See below
Are Lower Income Residential Demands Included In Projections? <i>Drop down list (y/n)</i>	Yes
NOTES: The City's average consumption rate of the last 20 years has declined by about 1 percent each year. For conservative projection purposes, a passive savings of 0.5% per year will be used for future demand projections. Low income demands are based on the latest City General Plan, which references SCAG data. According to SCAG, about 62% of the City's households are considered "low income".	

DRAFT Submittal Table 5-1 Baselines and Targets Summary <i>Retail Supplier or Regional Alliance Only</i>				
Baseline Period	Start Year	End Year	Average Baseline GPCD*	Confirmed 2020 Target*
10-15 year	2001	2010	77	142
5 Year	2004	2008	76	
*All values are in Gallons per Capita per Day (GPCD)				
NOTES: Baselines and Targets are found in SBx7-7 Table 6 in Appendix F and in Section 6 of the 2020 UWMP.				

**DRAFT Submittal Table 5-2: 2020 Compliance**
*Retail Supplier or Regional Alliance Only*

Actual 2020 GPCD*	Optional Adjustments to 2020 GPCD					2020 GPCD* <i>(Adjusted if applicable)</i>	Did Supplier Achieve Targeted Reduction for 2020? Y/N
	Enter "0" if no adjustment is made						
	<i>Methodology 8</i>						
	Extraordinary Events*	Economic Adjustment*	Weather Normalization*	TOTAL Adjustments*	Adjusted 2020 GPCD*		
69	0	0	0	0	69	69	Yes

*\*All values are in Gallons per Capita per Day (GPCD)*

NOTES: 69 GPCD has been determined by using the City's Water Production Demand Totals for CY 2020. For CY 2020, this is 4,357 AF \* 325,851 gallons/AF / 56,539 persons / 365 days = 69 GPCD. Per Section 6, City's 2020 Target was 141.5 GPCD. City's 2020 Water Use is well under the 2020 Target.

**DRAFT Submittal Table 6-1 Retail: Groundwater Volume Pumped**

<input type="checkbox"/>	Supplier does not pump groundwater. The supplier will not complete the table below.					
<input type="checkbox"/>	All or part of the groundwater described below is desalinated.					
Groundwater Type <i>Drop Down List</i> <i>May use each category multiple times</i>	Location or Basin Name	2016	2017	2018	2019	2020
<i>Add additional rows as needed</i>						
Alluvial Basin	Central Groundwater Basin	3,097	4,137	3,365	2,888	2,827
<b>TOTAL</b>		3,097	4,137	3,365	2,888	2,827

NOTES: City pumps groundwater from four (4) well (Well 12, 14, 16 & 18). The City's adjudicated pumping rights are 3,853 AFY. Thus, the City has been pumping at approximately 73% of its capacity.

DRAFT Submittal Table 6-2 Retail: Wastewater Collected Within Service Area in 2020						
<input type="checkbox"/>	There is no wastewater collection system. The supplier will not complete the table below.					
	Percentage of 2020 service area covered by wastewater collection system <i>(optional)</i>					
	Percentage of 2020 service area population covered by wastewater collection system <i>(optional)</i>					
Wastewater Collection			Recipient of Collected Wastewater			
Name of Wastewater Collection Agency	Wastewater Volume Metered or Estimated? <i>Drop Down List</i>	Volume of Wastewater Collected from UWMP Service Area 2020	Name of Wastewater Treatment Agency Receiving Collected Wastewater	Treatment Plant Name	Is WWTP Located Within UWMP Area? <i>Drop Down List</i>	Is WWTP Operation Contracted to a Third Party? <i>(optional)</i> <i>Drop Down List</i>
<i>Add additional rows as needed</i>						
City of Huntington Park	Estimated	3,119	Los Angeles County Sanitation District	Joint Water Pollution Control Plant	No	
<b>Total Wastewater Collected from Service Area in 2020:</b>		3,119				
NOTES: The wastewater flows were calculated assuming wastewater flow is equivalent to about 75 percent of the water demand and a Metered Consumption in 2020 of 4,071 AF.						

DRAFT Submittal Table 6-3 Retail: Wastewater Treatment and Discharge Within Service Area in 2020											
<input checked="" type="checkbox"/>	No wastewater is treated or disposed of within the UWMP service area. The Supplier will not complete the table below.										
Wastewater Treatment Plant Name	Discharge Location Name or Identifier	Discharge Location Description	Wastewater Discharge ID Number <i>(optional)</i>	Method of Disposal <i>Drop down list</i>	Does This Plant Treat Wastewater Generated Outside the Service Area? <i>Drop down list</i>	Treatment Level <i>Drop down list</i>	2020 volumes				
							Wastewater Treated	Discharged Treated Wastewater	Recycled Within Service Area	Recycled Outside of Service Area	Instream Flow Permit Requirement
<i>Add additional rows as needed</i>											
<b>Total</b>							0	0	0	0	0
NOTES: Wastewater is collected witin the City's service area by the Los Angeles County Sanitation Districts (LACSD), which then discharges the wastewater to the Joint Water Pollution Control Plant (JWPCP), located in the City of Carson. The JWPCP is located about 14 miles away from the center of the City. The JWPCP is owned and operated by LACSD.											

**DRAFT Submittal Table 6-4 Retail: Recycled Water Direct Beneficial Uses Within Service Area**



Recycled water is not used and is not planned for use within the service area of the supplier.  
The supplier will not complete the table below.

Name of Supplier Producing (Treating) the Recycled Water:										
Name of Supplier Operating the Recycled Water Distribution System:										
Supplemental Water Added in 2020 (volume) <i>Include units</i>										
Source of 2020 Supplemental Water										
Beneficial Use Type	Potential Beneficial Uses of Recycled Water (Describe)	Amount of Potential Uses of Recycled Water (Quantity) <i>Include volume units</i>	General Description of 2020 Uses	Level of Treatment <i>Drop down list</i>	2020	2025	2030	2035	2040	2045 (opt)
Agricultural irrigation										
Landscape irrigation (excludes golf courses)	Irrigation	AF	The City's recycled water distribution system provides irrigation to the Salt Lake Municipal Park.	Tertiary	44	52	52	52	52	52
Golf course irrigation										
Commercial use										
Industrial use										
Geothermal and other energy production										
Seawater intrusion barrier										
Recreational impoundment										
Wetlands or wildlife habitat										
Groundwater recharge (IPR)*										
Surface water augmentation (IPR)*										
Direct potable reuse										
Other (Provide General Description)										
					<b>Total:</b>	44	52	52	52	52
Internal Reuse (not counted towards Statewide Recycled Water volume ).										

*\*IPR - Indirect Potable Reuse*

NOTES: See Section 4 of the City's 2020 UWMP for details related to recycled water use.

DRAFT Submittal Table 6-5 Retail: 2015 UWMP Recycled Water Use Projection Compared to 2020 Actual			
<input type="checkbox"/>		Recycled water was not used in 2015 nor projected for use in 2020. The Supplier will not complete the table below.	
Use Type		2015 Projection for 2020	2020 Actual Use
Agricultural irrigation			
Landscape irrigation (excludes golf courses)		52	44
Golf course irrigation			
Commercial use			
Industrial use			
Geothermal and other energy production			
Seawater intrusion barrier			
Recreational impoundment			
Wetlands or wildlife habitat			
Groundwater recharge (IPR)			
Surface water augmentation (IPR)			
Direct potable reuse			
Other	Type of Use		
Total		52	44
NOTES: See Section 4 of the UWMP.			

DRAFT Submittal Table 6-6 Retail: Methods to Expand Future Recycled Water Use			
<input checked="" type="checkbox"/>		Supplier does not plan to expand recycled water use in the future. Supplier will not complete the table below but will provide narrative explanation.	
		Provide page location of narrative in UWMP	
Name of Action	Description	Planned Implementation Year	Expected Increase in Recycled Water Use
Add additional rows as needed			
Total			0
NOTES: The City is not planning on expanding the use of recycled water to other customers in the City's water service area through 2045. Pipeline infrastructure improvements have been proposed by Central Basin which will provide recycled water to businesses, parks, and schools. However, this extension is not located within the vicinity of potential recycled water users in the City. The City would have build their own extention lines, which is cost prohibitive for the foreseeable future.			

DRAFT Submittal Table 6-7 Retail: Expected Future Water Supply Projects or Programs						
<input checked="" type="checkbox"/>	No expected future water supply projects or programs that provide a quantifiable increase to the agency's water supply. Supplier will not complete the table below.					
<input type="checkbox"/>	Some or all of the supplier's future water supply projects or programs are not compatible with this table and are described in a narrative format.					
	Provide page location of narrative in the UWMP					
Name of Future Projects or Programs	Joint Project with other suppliers?		Description (if needed)	Planned Implementation Year	Planned for Use in Year Type <i>Drop Down List</i>	Expected Increase in Water Supply to Supplier <i>This may be a range</i>
	<i>Drop Down List (y/n)</i>	<i>If Yes, Agency Name</i>				
<i>Add additional rows as needed</i>						
NOTES: The City's imported and groundwater supplies are more than enough to meet the City's needs. However, the City may explore plans for additional groundwater wells for reasons of redundancy/resiliency.						



**DRAFT Submittal Table 7-1 Retail: Basis of Water Year Data (Reliability Assessment)**

Year Type	Base Year <i>If not using a calendar year, type in the last year of the fiscal, water year, or range of years, for example, water year 2019-2020, use 2020</i>	Available Supplies if Year Type Repeats	
		<input checked="" type="checkbox"/>	Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. Location _____ Section 7 _____
		<input type="checkbox"/>	Quantification of available supplies is provided in this table as either volume only, percent only, or both.
		Volume Available	% of Average Supply
Average Year	2017	5,100	100%
Single-Dry Year	2011	5,100	100%
Consecutive Dry Years 1st Year	2012	5,100	100%
Consecutive Dry Years 2nd Year	2013	5,100	100%
Consecutive Dry Years 3rd Year	2014	5,100	100%
Consecutive Dry Years 4th Year	2015	5,100	100%
Consecutive Dry Years 5th Year	2016	5,100	100%

Supplier may use multiple versions of Table 7-1 if different water sources have different base years and the supplier chooses to report the base years for each water source separately. If a Supplier uses multiple versions of Table 7-1, in the "Note" section of each table, state that multiple versions of Table 7-1 are being used and identify the particular water source that is being reported in each table.

NOTES: This table is better clarified by Section 7 of the UWMP. The dry-year volumes are not anticipated to be restricted. This is based on Central Basin's projected surplus even during drought years, as indicated in Section 7 of the UWMP. Also, since the City's adjudicated rights are relatively low, and since local agencies such as WRD provide groundwater recharge in the basin, the City's groundwater supplies are not expected to be reduced for droughts lasting up to 5 years.

**DRAFT Submittal Table 7-2 Retail: Normal Year Supply and Demand Comparison**

	2025	2030	2035	2040	2045 (Opt)
Supply totals (autofill from Table 6-9)	5,152	5,152	5,152	5,152	5,152
Demand totals (autofill from Table 4-3)	4,443	4,239	4,194	4,144	4,094
Difference	709	913	958	1,008	1,058

NOTES: See Section 7 of the 2020 UWMP.

**DRAFT Submittal Table 7-3 Retail: Single Dry Year Supply and Demand Comparison**

	2025	2030	2035	2040	2045 (Opt)
Supply totals	5,100	5,100	5,100	5,100	5,100
Demand totals	4,609	4,561	4,510	4,458	4,402
Difference	491	539	590	642	698

NOTES: See Section 7 of the 2020 UWMP.

**DRAFT Submittal Table 7-4 Retail: Multiple Dry Years Supply and Demand Comparison**

		2025	2030	2035	2040	2045 (Opt)
First year	Supply totals	5,100	5,100	5,100	5,100	5,100
	Demand totals	4,667	4,605	4,544	4,482	4,441
	Difference	433	495	556	618	659
Second year	Supply totals	5,100	5,100	5,100	5,100	5,100
	Demand totals	4,788	4,725	4,662	4,599	4,556
	Difference	312	375	438	501	544
Third year	Supply totals	5,100	5,100	5,100	5,100	5,100
	Demand totals	4,510	4,451	4,392	4,332	4,292
	Difference	590	649	708	768	4,556
Fourth year	Supply totals	5,100	5,100	5,100	5,100	5,100
	Demand totals	4,499	4,440	4,381	4,331	4,282
	Difference	601	660	719	769	818
Fifth year	Supply totals	5,100	5,100	5,100	5,100	5,100
	Demand totals	4,477	4,431	4,382	4,330	4,277
	Difference	623	669	718	770	823

NOTES: See Section 7 of the 2020 UWMP.

**DRAFT Submittal Table 7-5: Five-Year Drought Risk Assessment  
Tables to address Water Code Section 10635(b)**

<b>2021</b>	<b>Total</b>
Total Water Use	4,667
Total Supplies	5,100
Surplus/Shortfall w/o WSCP Action	433
<b>Planned WSCP Actions</b> (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	0
WSCP - use reduction savings benefit	467
Revised Surplus/(shortfall)	900
Resulting % Use Reduction from WSCP action	10%

<b>2022</b>	<b>Total</b>
Total Water Use	4,788
Total Supplies	5,100
Surplus/Shortfall w/o WSCP Action	312
<b>Planned WSCP Actions</b> (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	0
WSCP - use reduction savings benefit	479
Revised Surplus/(shortfall)	791
Resulting % Use Reduction from WSCP action	10%

<b>2023</b>	<b>Total</b>
Total Water Use	4,510
Total Supplies	5,100
Surplus/Shortfall w/o WSCP Action	590
<b>Planned WSCP Actions</b> (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	0
WSCP - use reduction savings benefit	451
Revised Surplus/(shortfall)	1,041
Resulting % Use Reduction from WSCP action	10%

2024	Total
Total Water Use	4,499
Total Supplies	5,100
Surplus/Shortfall w/o WSCP Action	601
<b>Planned WSCP Actions</b> (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	0
WSCP - use reduction savings benefit	450
Revised Surplus/(shortfall)	1,051
Resulting % Use Reduction from WSCP action	10%

2025	Total
Total Water Use	4,477
Total Supplies	5,100
Surplus/Shortfall w/o WSCP Action	623
<b>Planned WSCP Actions</b> (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	0
WSCP - use reduction savings benefit	448
Revised Surplus/(shortfall)	1,070
Resulting % Use Reduction from WSCP action	10%

**DRAFT Submittal Table 8-1**

**Water Shortage Contingency Plan Levels**

Shortage Level	Complete Both	
	Percent Shortage Range <sup>1</sup> <i>Numerical value as a percent</i>	Water Shortage Condition <i>(Narrative description)</i>
<i>Add additional rows as needed</i>		
1	Up to 10%	Shortage Alert
2	Up to 20%	Shortage Condition
3	Up to 30%	Severe Shortage Condition
4	Up to 40%	Critical Shortage Condition
5	Up to 50%	Emergency Shortage Condition
6	>50%	Crisis Shortage Condition
<sup>1</sup> One stage in the Water Shortage Contingency Plan must address a water shortage of 50%.		
NOTES: Shortage Levels are mentioned in Section 8 of the City's 2020 UWMP.		

Submittal Table 8-2: Demand Reduction Actions			
Shortage Level	Demand Reduction Actions <b>Drop down list</b> <i>These are the only categories that will be accepted by the WUEdata online submittal tool. Select those that apply.</i>	How much is this going to reduce the shortage gap? Include units used (volume type or percentage)	Penalty, Charge, or Other Enforcement? <i>For Retail Suppliers Only Drop Down List</i>
Add additional rows as needed			
Shortage Level 1	Landscape - Restrict or prohibit runoff from landscape irrigation	Up to 10%	Yes
Shortage Level 2	Other - Prohibit vehicle washing except at facilities using recycled or recirculating water	Up to 20%	Yes
Shortage Level 3	CII - Lodging establishment must offer opt out of linen service	Up to 30%	Yes
Shortage Level 4	Landscape - Prohibit all landscape irrigation	Up to 40%	Yes
Shortage Level 5	Other	Up to 50%	Yes
Shortage Level 6	Other	Greater than 50%	Yes
NOTES: Only one sample from each stage is listed. See UWMP Section 8 for complete list of demand reduction actions.			

Submittal Table 8-3: Supply Augmentation and Other Actions			
Shortage Level	Supply Augmentation Methods and Other Actions by Water Supplier <b>Drop down list</b> <i>These are the only categories that will be accepted by the WUEdata online submittal</i>	How much is this going to reduce the shortage gap? Include units used (volume type or percentage)	Additional Explanation or Reference (optional)
Add additional rows as needed			
Shortage Level 1	Expand Public Information Campaign	Up to 10%	
Shortage Level 2	Improve Customer Billing	Up to 20%	Billing can be used to flag high use.
Shortage Level 3	Transfers	Up to 30%	Coordination with adjacent agencies to prepare for possible need of water if conditions worsen.
Shortage Level 4	Other purchases	Up to 40%	Possible rental of purchase of potable water tanks, or potable pumps.
Shortage Level 5	Implement or Modify Drought Rate Structure or Surcharge	Up to 50%	
Shortage Level 6	Other actions (describe)	Greater than 50%	Mobilize potable water trucks. Decrease pressure in water mains.
NOTES: Only one sample from each stage is listed. See UWMP Section 8 for complete list of actions.			

DRAFT Submittal Table 8-4 Retail: Minimum Supply Next Three Years			
	2022	2023	2024
Available Water Supply	4,860	4,860	4,860
NOTES: See Section 8.11.			

DRAFT Submittal Table 10-1 Retail: Notification to Cities and Counties		
City Name	60 Day Notice	Notice of Public Hearing
<i>Add additional rows as needed</i>		
City of Bell	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
City of South Gate	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
City of Vernon	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
LA County Regional Planning Department	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Central Basin Municipal Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Golden State Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Maywood Mutual Water Company #1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Walnut Park Mutual Water Company	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Water Replenishment District	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
County Name <i>Drop Down List</i>	60 Day Notice	Notice of Public Hearing
<i>Add additional rows as needed</i>		
Los Angeles County	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>



## **Appendix F: Dept. of Water Resources SBx7-7 Data Tables**

**City of Huntington Park 2020 Urban Water Management Plan**

**SB X7-7 Table 0: Units of Measure Used in UWMP\****(select one from the drop down list)*

Acre Feet

*\*The unit of measure must be consistent with Table 2-3*

NOTES:

**SB X7-7 Table-1: Baseline Period Ranges**

Baseline	Parameter	Value	Units
10- to 15-year baseline period	2008 total water deliveries	5,242	Acre Feet
	2008 total volume of delivered recycled water	60	Acre Feet
	2008 recycled water as a percent of total deliveries	1.15%	Percent
	Number of years in baseline period <sup>1, 2</sup>	10	Years
	Year beginning baseline period range	2001	
	Year ending baseline period range <sup>3</sup>	2010	
5-year baseline period	Number of years in baseline period	5	Years
	Year beginning baseline period range	2004	
	Year ending baseline period range <sup>4</sup>	2008	

<sup>1</sup>If the 2008 recycled water percent is less than 10 percent, then the first baseline period is a continuous 10-year period. If the amount of recycled water delivered in 2008 is 10 percent or greater, the first baseline period is a continuous 10- to 15-year period. <sup>2</sup>  
 The Water Code requires that the baseline period is between 10 and 15 years. However, DWR recognizes that some water suppliers may not have the minimum 10 years of baseline data.

<sup>3</sup>The ending year must be between December 31, 2004 and December 31, 2010.

<sup>4</sup>The ending year must be between December 31, 2007 and December 31, 2010.

NOTES: See Section 6.7.2 of UWMP.

**SB X7-7 Table 2: Method for Population Estimates**

Method Used to Determine Population (may check more than one)	
<input checked="" type="checkbox"/>	<b>1. Department of Finance (DOF)</b> DOF Table E-8 (1990 - 2000) and (2000-2010) and DOF Table E-5 (2011 - 2015) when available
<input type="checkbox"/>	<b>2. Persons-per-Connection Method</b>
<input type="checkbox"/>	<b>3. DWR Population Tool</b>
<input type="checkbox"/>	<b>4. Other</b> DWR recommends pre-review
NOTES:	

**SB X7-7 Table 3: Service Area Population**

Year		Population
10 to 15 Year Baseline Population		
Year 1	2001	62,080
Year 2	2002	62,850
Year 3	2003	63,840
Year 4	2004	64,265
Year 5	2005	64,466
Year 6	2006	64,362
Year 7	2007	64,285
Year 8	2008	64,270
Year 9	2009	64,376
Year 10	2010	64,219
5 Year Baseline Population		
Year 1	2004	64,265
Year 2	2005	64,466
Year 3	2006	64,362
Year 4	2007	64,285
Year 5	2008	64,270
2020 Compliance Year Population		
2020		56,539
NOTES: Service Area Populations for Baseline Years were taken from 2015 UWMP SB X7-7 Table 3 (i.e. no change from 2015 UWMP)		

**SB X7-7 Table 4: Annual Gross Water Use \***

Baseline Year <i>Fm SB X7-7 Table 3</i>		Volume Into Distribution System <i>This column will remain blank until SB X7-7 Table 4-A is completed.</i>	Deductions					Annual Gross Water Use
			Exported Water	Change in Dist. System Storage (+/-)	Indirect Recycled Water <i>This column will remain blank until SB X7-7 Table 4-B is completed.</i>	Water Delivered for Agricultural Use	Process Water <i>This column will remain blank until SB X7-7 Table 4-D is completed.</i>	
10 to 15 Year Baseline - Gross Water Use								
Year 1	2001	5,948	-	-	-	-	-	5,948
Year 2	2002	5,987	-	-	-	-	-	5,987
Year 3	2003	5,776	-	-	-	-	-	5,776
Year 4	2004	5,800	-	-	-	-	-	5,800
Year 5	2005	5,490	-	-	-	-	-	5,490
Year 6	2006	5,441	-	-	-	-	-	5,441
Year 7	2007	5,395	-	-	-	-	-	5,395
Year 8	2008	5,242	-	-	-	-	-	5,242
Year 9	2009	5,067	-	-	-	-	-	5,067
Year 10	2010	4,843	-	-	-	-	-	4,843
10 - 15 year baseline average gross water use								5,499
5 Year Baseline - Gross Water Use								
Year 1	2004	5,800	-	-	-	-	-	5,800
Year 2	2005	5,490	-	-	-	-	-	5,490
Year 3	2006	5,441	-	-	-	-	-	5,441
Year 4	2007	5,395	-	-	-	-	-	5,395
Year 5	2008	5,242	-	-	-	-	-	5,242
5 year baseline average gross water use								5,474
2020 Compliance Year - Gross Water Use								
2020		4,357	-	-	-	-	-	4,357
* NOTE that the units of measure must remain consistent throughout the UWMP, as reported in Table 2-3								
NOTES: See Section 6.7.2 of the UWMP.								

# SB X7-7 Table 4-A: Volume Entering the Distribution System(s)

Complete one table for each source.

<b>Name of Source</b>		Groundwater Wells and Imported Water		
<b>This water source is:</b>				
<input checked="" type="checkbox"/>	The supplier's own water source			
<input checked="" type="checkbox"/>	A purchased or imported source			
<b>Baseline Year</b> <i>Fm SB X7-7 Table 3</i>	<b>Volume Entering Distribution System</b>	<b>Meter Error Adjustment*</b> <i>Optional (+/-)</i>	<b>Corrected Volume Entering Distribution System</b>	
10 to 15 Year Baseline - Water into Distribution System				
Year 1	2001	5,948		5,948
Year 2	2002	5,987		5,987
Year 3	2003	5,776		5,776
Year 4	2004	5,800		5,800
Year 5	2005	5,490		5,490
Year 6	2006	5,441		5,441
Year 7	2007	5,395		5,395
Year 8	2008	5,242		5,242
Year 9	2009	5,067		5,067
Year 10	2010	4,843		4,843
5 Year Baseline - Water into Distribution System				
Year 1	2004	5,800		5,800
Year 2	2005	5,490		5,490
Year 3	2006	5,441		5,441
Year 4	2007	5,395		5,395
Year 5	2008	5,242		5,242
2020 Compliance Year - Water into Distribution System				
<b>2020</b>		4,357		4,357
* Meter Error Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document				
NOTES: See Section 6.7.2 of the UWMP. The City's Total reported Volume of water Entering its Distribution System accounts for water loss, but this value is not broken down by source. Therefore, only one table was used with the sum of groundwater and imported water.				

**SB X7-7 Table 5: Gallons Per Capita Per Day (GPCD)**

<b>Baseline Year</b> <i>Fm SB X7-7 Table 3</i>		<b>Service Area Population</b> <i>Fm SB X7-7 Table 3</i>	<b>Annual Gross Water Use</b> <i>Fm SB X7-7 Table 4</i>	<b>Daily Per Capita Water Use (GPCD)</b>
<b>10 to 15 Year Baseline GPCD</b>				
Year 1	2001	62,080	5,948	86
Year 2	2002	62,850	5,987	85
Year 3	2003	63,840	5,776	81
Year 4	2004	64,265	5,800	81
Year 5	2005	64,466	5,490	76
Year 6	2006	64,362	5,441	75
Year 7	2007	64,285	5,395	75
Year 8	2008	64,270	5,242	73
Year 9	2009	64,376	5,067	70
Year 10	2010	64,219	4,843	67
<b>10-15 Year Average Baseline GPCD</b>				<b>77</b>
<b>5 Year Baseline GPCD</b>				
<b>Baseline Year</b> <i>Fm SB X7-7 Table 3</i>		<b>Service Area Population</b> <i>Fm SB X7-7 Table 3</i>	<b>Gross Water Use</b> <i>Fm SB X7-7 Table 4</i>	<b>Daily Per Capita Water Use</b>
Year 1	2004	64,265	5,800	81
Year 2	2005	64,466	5,490	76
Year 3	2006	64,362	5,441	75
Year 4	2007	64,285	5,395	75
Year 5	2008	64,270	5,242	73
<b>5 Year Average Baseline GPCD</b>				<b>76</b>
<b>2020 Compliance Year GPCD</b>				
<b>2020</b>		56,539	4,357	<b>69</b>
NOTES: See Section 6.7.2 of the UWMP.				

**SB X7-7 Table 6: Gallons per Capita per Day**  
*Summary From Table SB X7-7 Table 5*

10-15 Year Baseline GPCD	77
5 Year Baseline GPCD	76
2020 Compliance Year GPCD	69
NOTES: See Section 6.7.2 of the UWMP.	

**SB X7-7 Table 7: 2020 Target Method***Select Only One*

Target Method		Supporting Documentation
<input type="checkbox"/>	Method 1	SB X7-7 Table 7A
<input type="checkbox"/>	Method 2	SB X7-7 Tables 7B, 7C, and 7D <i>See UWMP DWR webpage or contact staff for these tables</i>
<input checked="" type="checkbox"/>	Method 3	SB X7-7 Table 7-E
<input type="checkbox"/>	Method 4	Method 4 Calculator

NOTES: See Section 6.7.2 of the UWMP.

**SB X7-7 Table 7-A: Target Method 1**

20% Reduction

10-15 Year Baseline GPCD	2020 Target GPCD
77	61

NOTES: See Section 6.7.2 of the UWMP.

**SB X7-7 Table 7-E: Target Method 3**

Agency May Select More Than One as Applicable	Percentage of Service Area in This Hydrological Region	Hydrologic Region	"2020 Plan" Regional Targets	Method 3 Regional Targets (95%)
<input type="checkbox"/>		North Coast	137	130
<input type="checkbox"/>		North Lahontan	173	164
<input type="checkbox"/>		Sacramento River	176	167
<input type="checkbox"/>		San Francisco Bay	131	124
<input type="checkbox"/>		San Joaquin River	174	165
<input type="checkbox"/>		Central Coast	123	117
<input type="checkbox"/>		Tulare Lake	188	179
<input type="checkbox"/>		South Lahontan	170	162
<input checked="" type="checkbox"/>	100%	South Coast	149	142
<input type="checkbox"/>		Colorado River	211	200
<b>Target</b> <i>(If more than one region is selected, this value is calculated.)</i>				<b>142</b>

NOTES: See Section 6.7.2 of the UWMP.

**SB X7-7 Table 7-F: Confirm Minimum Reduction for 2020 Target**

5 Year Baseline GPCD <i>From SB X7-7 Table 5</i>	Maximum 2020 Target <sup>1</sup>	Calculated 2020 Target <sup>2</sup>	Confirmed 2020 Target
76	N/A	142	<b>142</b>

<sup>1</sup> Maximum 2020 Target is 95% of the 5 Year Baseline GPCD except for suppliers at or below 100 GPCD.

<sup>2</sup> 2020 Target is calculated based on the selected Target Method, see SB X7-7 Table 7 and corresponding tables for agency's calculated target.

NOTES: See Section 6.7.2 of the UWMP.

**SB X7-7 Table 8: 2015 Interim Target GPCD**

Confirmed 2020 Target <i>Fm SB X7-7 Table 7-F</i>	10-15 year Baseline GPCD <i>Fm SB X7-7 Table 5</i>	2015 Interim Target GPCD
142	77	<b>109</b>

NOTES: See Section 6.7.2 of the UWMP.

**SB X7-7 Table 9: 2020 Compliance**

Actual 2020 GPCD	2020 Confirmed Target GPCD	Optional Adjustments <i>(in GPCD)</i>					2020 GPCD <i>(Adjusted if applicable)</i>	Did Supplier Achieve Targeted Reduction for 2020?
		Enter "0" if Adjustment Not Used			TOTAL Adjustments	Adjusted 2020 GPCD		
		Extraordinary Events	Weather Normalization	Economic Adjustment				
69	142	-	-	-	-	69	69	YES

NOTES: See Section 6.7.2 of the UWMP.

**SB X7-7 Table 0: Units of Measure Used in 2020 UWMP\****(select one from the drop down list)*

Acre Feet

*\*The unit of measure must be consistent throughout the UWMP, as reported in Submittal Table 2-3.*

NOTES:

**SB X7-7 Table 2: Method for 2020 Population Estimate****Method Used to Determine 2020 Population**

(may check more than one)

**1. Department of Finance (DOF) or  
American Community Survey (ACS)****2. Persons-per-Connection Method****3. DWR Population Tool****4. Other**  
DWR recommends pre-review

NOTES: The City's service area accounts for about 95 percent of the City's total residents. For a more detailed description of the Method for Population Estimates see Section 2.5.

**SB X7-7 Table 3: 2020 Service Area Population****2020 Compliance Year Population****2020**

56,539

NOTES: The City's service area accounts for about 95 percent of the City's total residents. For a more detailed description of the Method for Population Estimates see Section 2.5.

**SB X7-7 Table 4: 2020 Gross Water Use**

Compliance Year 2020	2020 Volume Into Distribution System <i>This column will remain blank until SB X7-7 Table 4-A is completed.</i>	2020 Deductions					2020 Gross Water Use
		Exported Water *	Change in Dist. System Storage* (+/-)	Indirect Recycled Water <i>This column will remain blank until SB X7-7 Table 4-B is completed.</i>	Water Delivered for Agricultural Use*	Process Water <i>This column will remain blank until SB X7-7 Table 4-D is completed.</i>	
	4,357	-	-	-	-	-	4,357

\* **Units of measure (AF, MG , or CCF)** must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.

NOTES: See Section 6.5.2 and 6.7.2 of the UWMP

**SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s),  
Meter Error Adjustment**

Complete one table for each source.

Name of Source		Groundwater Wells and Imported Water		
This water source is (check one) :				
<input checked="" type="checkbox"/>	The supplier's own water source			
<input checked="" type="checkbox"/>	A purchased or imported source			
Compliance Year 2020	Volume Entering Distribution System <sup>1</sup>	Meter Error Adjustment <sup>2</sup> <i>Optional (+/-)</i>	Corrected Volume Entering Distribution System	
	4,357	-	4,357	

<sup>1</sup> **Units of measure (AF, MG , or CCF)** must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.

**Error Adjustment** - See guidance in Methodology 1, Step 3 of Methodologies Document

<sup>2</sup> **Meter**

NOTES: See Section 6.5.2 and Section 6.7.2 of the UWMP.

**SB X7-7 Table 5: 2020 Gallons Per Capita Per Day (GPCD)**

2020 Gross Water <i>Fm SB X7-7 Table 4</i>	2020 Population <i>Fm SB X7-7 Table 3</i>	2020 GPCD
4,357	56,539	69
NOTES: See Section 6.5.2 of the UWMP.		

**SB X7-7 Table 9: 2020 Compliance**

Actual 2020 GPCD <sup>1</sup>	Optional Adjustments to 2020 GPCD					2020 Confirmed Target GPCD <sup>1, 2</sup>	Did Supplier Achieve Targeted Reduction for 2020?
	Enter "0" if Adjustment Not Used			TOTAL Adjustments <sup>1</sup>	Adjusted 2020 GPCD <sup>1</sup> <i>(Adjusted if applicable)</i>		
	Extraordinary Events <sup>1</sup>	Weather Normalization <sup>1</sup>	Economic Adjustment <sup>1</sup>				
69	-	-	-	-	69	142	YES

<sup>1</sup> All values are reported in GPCD

<sup>2</sup> **2020 Confirmed Target GPCD** is taken from the Supplier's SB X7-7 Verification Form Table SB X7-7, 7-F.

NOTES: See Section 6.5.2 and 6.7.2 of the UWMP.



## **Appendix G: AWWA Water Loss Audits (2016-2019)**

---

**City of Huntington Park 2020 Urban Water Management Plan**



## CA-NV AWWA Water Loss Technical Assistance Program Wave 4 Water Audit Level 1 Validation Document

Water System Name: City of Huntington Park

Water System ID Number: 1910049

Water Audit Period: Calendar 2016

### Water Audit & Water Loss Improvement Steps:

*Steps taken in preceding year to increase data validity, reduce real loss and apparent loss as informed by the annual validated water audit:*

Attended all Wave training. Began collecting data on production well annual calibration testing. Survey City facilities for installation of water meters. Initiated large meter change out program; researching feasibility of meter replacement policy. Upgrade SCADA system to effectively manage water system operation. System integration in progress. Discussing feasibility and procedure for a random meter testing policy. Registered for Water Loss Conference.

### Certification Statement by Utility Executive:

This water loss audit report meets the requirements of California Code of Regulations Title 23, Division 2, Chapter 7 and the California Water Code Section 10608.34 and has been prepared in accordance with the method adopted by the American Water Works Association, as contained in their manual, *Water Audits and Loss Control Programs, Manual M36, Fourth Edition* and in the Free Water Audit Software version 5.

Utility Provided

Edgar P. Cisneros

City Manager

Edgar P. Cisneros

09/17/2017

Executive Name (Print)

Executive Position

Signature

Date

## CA-NV AWWA Water Loss Technical Assistance Program Wave 4 Water Audit Level 1 Validation Document

### Audit Information:

Utility: Huntington Park      PWS ID: 1910049  
System Type: Potable      Audit Period: Calendar 2016  
Utility Representation: Christina Dixon (Public works analyst), Daniel Hernandez (Public Works Director), Iris Ramos  
Validation Date: 8/23/2017      Call Time: 2pm      Sufficient Supporting Documents Provided: Yes

### Validation Findings & Confirmation Statement:

#### Key Audit Metrics:

Data Validity Score: 63      Data Validity Band (Level): Band III (51-70)  
ILI: 2.26      Real Loss: 24.79 (gal/conn/day)      Apparent Loss: 9.74 (gal/conn/day)  
Non-Revenue Water as a Percentage of Operation Costs: 3.1%

#### Certification Statement by Validator:

This water loss audit report has been Level 1 validated per the requirements of California Code of Regulations Title 23, Division 2, Chapter 7 and the California Water Code Section 10608.34.

All recommendations on volume derivation and Data Validity Grades were incorporated into the water audit. ☒

### Validator Information:

Water Audit Validator: Reinhard Sturm / Carolyn Prescott (support) Validator Qualifications: Contractor for CA-NV AWWA Water Loss TAP

Validator Provided

# AWWA Free Water Audit Software: System Attributes and Performance Indicators

WAS v5.0  
American Water Works Association

Water Audit Report for: **City of Huntington Park**  
Reporting Year: **2016** **1/2016 - 12/2016**

\*\*\* YOUR WATER AUDIT DATA VALIDITY SCORE IS: 63 out of 100 \*\*\*

## System Attributes:

Apparent Losses:	60.082	acre-ft/yr
+ Real Losses:	152.905	acre-ft/yr
= <b>Water Losses:</b>	<b>212.987</b>	acre-ft/yr
<b>? voidable Annual Real Losses (UARL):</b>	<b>67.55</b>	acre-ft/yr
Annual cost of Apparent Losses:	\$65,168	
Annual cost of Real Losses:	\$83,806	

Valued at **Variable Production Cost**

Return to Reporting Worksheet to change this assumption

## Performance Indicators:

Financial: **Non-revenue water as percent by volume of Water Supplied:**  5.4% **Real Losses valued at Variable Production Cost**  
**Non-revenue water as percent by cost of operating system:**  3.1%

Operational Efficiency: **Apparent Losses per service connection per day:**  9.74 gallons/connection/day  
**Real Losses per service connection per day:**  24.79 gallons/connection/day  
**Real Losses per length of main per day\*:**  N/A  
**Real Losses per service connection per day per psi pressure:**  0.45 gallons/connection/day/psi

From Above, Real Losses = Current Annual Real Losses (CARL):  152.91 acre-feet/year  
**? structure Leakage Index (ILI) [CARL/UARL]:**  2.26

\* This performance indicator applies for systems with a low service connection density of less than 32 service connections/mile of pipeline



Reporting Worksheet 2

## Level 1 Validation Certificate



This document verifies that the Level 1 Validation process was completed. The session details and audit review outcomes are included here.

*This certificate is required for submission – alongside the Level 1 validated water audit software file – to the California Department of Water Resources.*

Call Date: 9/18/2018

### Water Supplier

Supplier Name: City of Huntington Park

Supplier Participants: Christina Dixon  
Iris Ramos  
Daniel Hernandez

### Key Audit Metrics

Data Validity Score:	66	
ILI:	1.14	
Real Loss:	14.74	gal / conn / day
Apparent Loss:	9.47	gal / conn / day
Non-Revenue Water as Percent of Cost of Operating System:	5.1%	

### Validator

Validator: Isabel Szendrey,  
Water Systems Optimization

Validator Qualifications: Water Audit Validator Certificate from  
the AWWA California Nevada Section

### Certification Statement by Validator

This water loss audit report has been Level 1 validated per the requirements of California Code of Regulations Title 23, Division 2, Chapter 7 and the California Water Code Section 10608.34.

All recommendations on volume derivation and Data Validity Grades were incorporated into the water audit. ☒

## Level 1 Validation – Water Supplier Confirmation

This document confirms participation in and endorsement of the Level 1 Validation as completed.

*This acknowledgement is required for submission – alongside your Level 1 validated water audit software file – to the California Department of Water Resources.*

Water Supplier Name: City of Huntington Park

Water Supplier Public Water System ID: 1910049

Water Audit Period: 01/01/17- 12/31/17

### Water Audit & Water Loss Improvement Steps

*Steps taken in the audit period timeframe to increase data source accuracy, reduce real losses, and/or reduce apparent losses, as informed by the water audit.*

The utility initiated a large meter replacement program and has budgeted for a modest expansion of the program for the next reporting period. The utility brought a SCADA system and GIS system online during the current reporting period. Data collection for metering of unmetered City facilities commenced. Also, planning commenced for a modest meter testing program which includes funding. Finally, procedural practices such as collecting calibration data were implemented. These combined practices translated to a 3 point increase from the preceding reporting period.


### Certification Statement by Water Supplier Executive:

This water loss audit report meets the requirements of California Code of Regulations Title 23, Division 2, Chapter 7 and the California Water Code Section 10608.34 and has been prepared in accordance with the method adopted by the American Water Works Association, as contained in their manual, *Water Audits and Loss Control Programs, Manual M36, Fourth Edition* and in the Free Water Audit Software version 5.

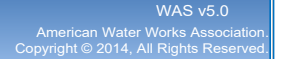
Executive Name (print): Ricardo Reyes

Executive Position: City Manager

Signature:



Date: September 26, 2018

Reporting Worksheet 2

## Level 1 Validation Certificate



This document verifies that the Level 1 Validation process was completed. The session details and audit review outcomes are included here.

*This certificate is required for submission – alongside the Level 1 validated water audit software file – to the California Department of Water Resources.*

Call Date: 8/29/2019

### Water Supplier

Supplier Name: City of Huntington Park

Supplier Participants: Christina Dixon

### Key Audit Metrics

Data Validity Score: 70

ILI: 1.41

Real Loss: 15.45 gal / conn / day

Apparent Loss: 9.55 gal / conn / day

Non-Revenue Water as Percent of  
Cost of Operating System: 3.1%

### Validator

Validator: Colin Stief  
Water Systems Optimization

Validator Qualifications: Water Audit Validator Certificate from  
the AWWA California Nevada Section

### Certification Statement by Validator

This water loss audit report has been Level 1 validated per the requirements of California Code of Regulations Title 23, Division 2, Chapter 7 and the California Water Code Section 10608.34.

All recommendations on volume derivation and Data Validity Grades were incorporated into the water audit. ☒

## Level 1 Validation – Water Supplier Confirmation

This document confirms participation in and endorsement of the Level 1 Validation as completed.

*This acknowledgement is required for submission – alongside your Level 1 validated water audit software file – to the California Department of Water Resources.*

Water Supplier Name:

City of Huntington Park

Water Supplier Public Water System ID:

1910049

Water Audit Period:

Calendar Year 2018

### Water Audit & Water Loss Improvement Steps

*The City owned utility expanded the large meter exchange program. In addition, the utility initiated a large meter testing program; this program will be expanded during the next audit cycle to include the testing of small meters. An increase in funding for the current audit cycle will accelerate the large meter replacement program. Finally, the City surveyed all city owned parcels and will develop a plan to install meters at currently unmetered parcels.*

### Certification Statement by Water Supplier Executive:

This water loss audit report meets the requirements of California Code of Regulations Title 23, Division 2, Chapter 7 and the California Water Code Section 10608.34 and has been prepared in accordance with the method adopted by the American Water Works Association, as contained in their manual, *Water Audits and Loss Control Programs, Manual M36, Fourth Edition* and in the Free Water Audit Software version 5.

Executive Name (print):

Ricardo Reyes

Executive Position:

City Manager

Signature:

Date September 25, 2019



# AWWA Free Water Audit Software: Reporting Worksheet

WAS v5.0

American Water Works Association



Click to access definition

Water Audit Report for: **City of Huntington Park (1910049)**

Click to add a comment

Reporting Year:

**2018****1/2018 - 12/2018**

Please enter data in the white cells below. Where available, metered values should be used; if metered values are unavailable please estimate a value. Indicate your confidence in the

## All volumes to be entered as: ACRE-FEET PER YEAR

To select the correct data grading for each input, determine the highest grade where the utility meets or exceeds all criteria for

### WATER SUPPLIED

Volume from own sources:  7  3,362.890 acre-ft/yr  
Water imported:  7  727.130 acre-ft/yr  
Water exported:  5  0.000 acre-ft/yr

### Master Meter and Supply Error Adjustments

Pcnt:  3   -68.100 acre-ft/yr  
Value:  3    acre-ft/yr

Enter negative % or value for under-registration  
Enter positive % or value for over-registration

**WATER SUPPLIED: 4,158.120** acre-ft/yr

### AUTHORIZED CONSUMPTION

Billed metered:  7  3,948.630 acre-ft/yr  
Billed unmetered:  7  0.000 acre-ft/yr  
Unbilled metered:  7  0.000 acre-ft/yr  
Unbilled unmetered:  5  51.977 acre-ft/yr

Default option selected for Unbilled unmetered - a grading of 5 is applied but not displayed

**AUTHORIZED CONSUMPTION: 4,000.607** acre-ft/yr

Click here: [?](#)  
for help using  
option buttons

Pcnt:  1.25% ☒ ☐ Value:   acre-ft/yr

Use buttons to select  
percentage of water  
supplied  
OR  
value

### WATER LOSSES (Water Supplied - Authorized Consumption)

**157.514** acre-ft/yr

### Apparent Losses

Unauthorized consumption:  5  10.395 acre-ft/yr

Default option selected for unauthorized consumption - a grading of 5 is applied but not displayed

Customer metering inaccuracies:  5  39.885 acre-ft/yr  
Systematic data handling errors:  5  9.872 acre-ft/yr

Default option selected for Systematic data handling errors - a grading of 5 is applied but not displayed

**Apparent Losses: 60.152** acre-ft/yr

Pcnt:  0.25% ☒ ☐ Value:   acre-ft/yr

1.00% ☒ ☐   acre-ft/yr  
 0.25% ☐ ☐   acre-ft/yr

### Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: **97.361** acre-ft/yr

**WATER LOSSES: 157.514** acre-ft/yr

### NON-REVENUE WATER

**NON-REVENUE WATER: 209.490** acre-ft/yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

### SYSTEM DATA

Length of mains:  5  51.3 miles  
Number of active AND inactive service connections:  7  5,624  
Service connection density: **110** conn./mile main

Are customer meters typically located at the curbside or property line?  Yes

Average length of customer service line:  5 (length of service line, beyond the property boundary, that is the responsibility of the  
**Average length of customer service line has been set to zero and a data grading score of 10 has been applied**

Average operating pressure:  5  55.0 psi

### COST DATA

Total annual cost of operating water system:  10  \$5,020,260 \$/Year  
Customer retail unit cost (applied to Apparent Losses):  10  \$2.69 \$/100 cubic feet (ccf)  
Variable production cost (applied to Real Losses):  7  \$569.33 \$/acre-ft ☐ Use Customer Retail Unit Cost to value real

### WATER AUDIT DATA VALIDITY SCORE:

**\*\*\* YOUR SCORE IS: 70 out of 100 \*\*\***

A weighted scale for the components of consumption and water loss is included in the calculation of the Water Audit Data Validity Score

### PRIORITY AREAS FOR ATTENTION:

Based on the information provided, audit accuracy can be improved by addressing the following components:

**1: Volume from own sources**

**2: Customer metering inaccuracies**

**3: Billed metered**

## Level 1 Validation Certificate



This document verifies that the Level 1 Validation process was completed. The session details and audit review outcomes are included here.

*This certificate is required for submission – alongside the Level 1 validated water audit software file – to the California Department of Water Resources.*

Call Date: 9/3/2020

### Water Supplier

---

Supplier Name:	City of Huntington Park
Supplier Participants:	Cesar Roldan, Iris Ramos, James Tsumura, Whitford Marin

### Key Audit Metrics

---

Data Validity Score:	69	
ILI:	3.00	
Real Loss:	35.65	gal / conn / day
Apparent Loss:	9.31	gal / conn / day
Non-Revenue Water as Percent of Cost of Operating System:	5.3%	

### Validator

---

Validator:	Kim Manago Water Systems Optimization
Validator Qualifications:	Water Audit Validator Certificate from the AWWA California Nevada Section

### Certification Statement by Validator

---

This water loss audit report has been Level 1 validated per the requirements of California Code of Regulations Title 23, Division 2, Chapter 7 and the California Water Code Section 10608.34.

All recommendations on volume derivation and Data Validity Grades were incorporated into the water audit. ☒

## Level 1 Validation – Water Supplier Confirmation

This document confirms participation in and endorsement of the Level 1 Validation as completed.

*This acknowledgement is required for submission – alongside your Level 1 validated water audit software file – to the California Department of Water Resources.*

Water Supplier Name: City of Huntingon Park

Water Supplier Public Water System ID: 1910049

Water Audit Period: January 1, 2019 thru December 31, 2019

### Water Audit & Water Loss Improvement Steps

*Steps taken in the audit period timeframe to increase data source accuracy, reduce real losses, and/or reduce apparent losses, as informed by the water audit.*

Coordination with Water Operations and City Public Works staff to review all cross connections, backflow devices, replacing water meters and inventorying existing city facilities that do not presently have water meters.

### Certification Statement by Water Supplier Executive:

This water loss audit report meets the requirements of California Code of Regulations Title 23, Division 2, Chapter 7 and the California Water Code Section 10608.34 and has been prepared in accordance with the method adopted by the American Water Works Association, as contained in their manual, *Water Audits and Loss Control Programs, Manual M36, Fourth Edition* and in the Free Water Audit Software version 5.

Executive Name (print): Ricardo Reyes

Executive Position: City Manager

Signature:



Date: 9/17/2020



# AWWA Free Water Audit Software: Reporting Worksheet

WAS v5.0  
American Water Works Association  
Copyright © 2014, All Rights Reserved

? Click to access definition  
+ Click to add a comment

Water Audit Report for: **City of Huntington Park (1910049)**  
Reporting Year: **2019** 1/2019 - 12/2019

Please enter data in the white cells below. Where available, metered values should be used; if metered values are unavailable please estimate a value. Indicate your confidence in the accuracy of the input data by grading each component (n/a or 1-10) using the drop-down list to the left of the input cell. Hover the mouse over the cell to obtain a description of the grades

**All volumes to be entered as: ACRE-FEET PER YEAR**

To select the correct data grading for each input, determine the highest grade where the utility meets or exceeds all criteria for that grade and all grades below it.

## WATER SUPPLIED

Volume from own sources: + ? 7 2,883.550 acre-ft/yr  
Water imported: + ? 7 1,192.230 acre-ft/yr  
Water exported: + ? n/a 0.000 acre-ft/yr

## Master Meter and Supply Error Adjustments

Pcnt: Value:  
+ ? 3 -87.634 acre-ft/yr  
+ ? 3 -87.634 acre-ft/yr  
+ ? -87.634 acre-ft/yr

Enter negative % or value for under-registration  
Enter positive % or value for over-registration

**WATER SUPPLIED: 4,163.414** acre-ft/yr

## AUTHORIZED CONSUMPTION

Billed metered: + ? 7 3,828.250 acre-ft/yr  
Billed unmetered: + ? 3 0.000 acre-ft/yr  
Unbilled metered: + ? 1 0.000 acre-ft/yr  
Unbilled unmetered: + ? 5 52.043 acre-ft/yr

Default option selected for Unbilled unmetered - a grading of 5 is applied but not displayed

**AUTHORIZED CONSUMPTION: 3,880.293** acre-ft/yr

Click here: ?  
for help using option  
buttons below

Pcnt: Value:  
1.25% 0.000 acre-ft/yr

Use buttons to select  
percentage of water  
supplied  
OR  
value

Pcnt: Value:  
0.25% 0.000 acre-ft/yr

1.00% 0.000 acre-ft/yr  
0.25% 0.000 acre-ft/yr

## WATER LOSSES (Water Supplied - Authorized Consumption)

**283.121** acre-ft/yr

## Apparent Losses

Unauthorized consumption: + ? 10.409 acre-ft/yr

Default option selected for unauthorized consumption - a grading of 5 is applied but not displayed

Customer metering inaccuracies: + ? 5 38.669 acre-ft/yr  
Systematic data handling errors: + ? 5 9.571 acre-ft/yr

Default option selected for Systematic data handling errors - a grading of 5 is applied but not displayed

**Apparent Losses: 58.648** acre-ft/yr

## Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: ? **224.473** acre-ft/yr

**WATER LOSSES: 283.121** acre-ft/yr

## NON-REVENUE WATER

**NON-REVENUE WATER: 335.164** acre-ft/yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

## SYSTEM DATA

Length of mains: + ? 7 69.0 miles  
Number of active AND inactive service connections: + ? 7 5,621  
Service connection density: ? 81 conn./mile main

Are customer meters typically located at the curbside or property line? Yes

Average length of customer service line: + ? (length of service line, beyond the property boundary, that is the responsibility of the utility)

Average length of customer service line has been set to zero and a data grading score of 10 has been applied

Average operating pressure: + ? 5 55.0 psi

## COST DATA

Total annual cost of operating water system: + ? 10 \$5,020,260 \$/Year  
Customer retail unit cost (applied to Apparent Losses): + ? 10 \$2.69 \$/100 cubic feet (ccf)  
Variable production cost (applied to Real Losses): + ? 5 \$709.15 \$/acre-ft ☐ Use Customer Retail Unit Cost to value real losses

## WATER AUDIT DATA VALIDITY SCORE:

**\*\*\* YOUR SCORE IS: 69 out of 100 \*\*\***

A weighted scale for the components of consumption and water loss is included in the calculation of the Water Audit Data Validity Score

## PRIORITY AREAS FOR ATTENTION:

Based on the information provided, audit accuracy can be improved by addressing the following components:

1: Volume from own sources

2: Customer metering inaccuracies

3: Variable production cost (applied to Real Losses)



## **Appendix H: Land Use & Community Development Element – 2030 City General Plan**

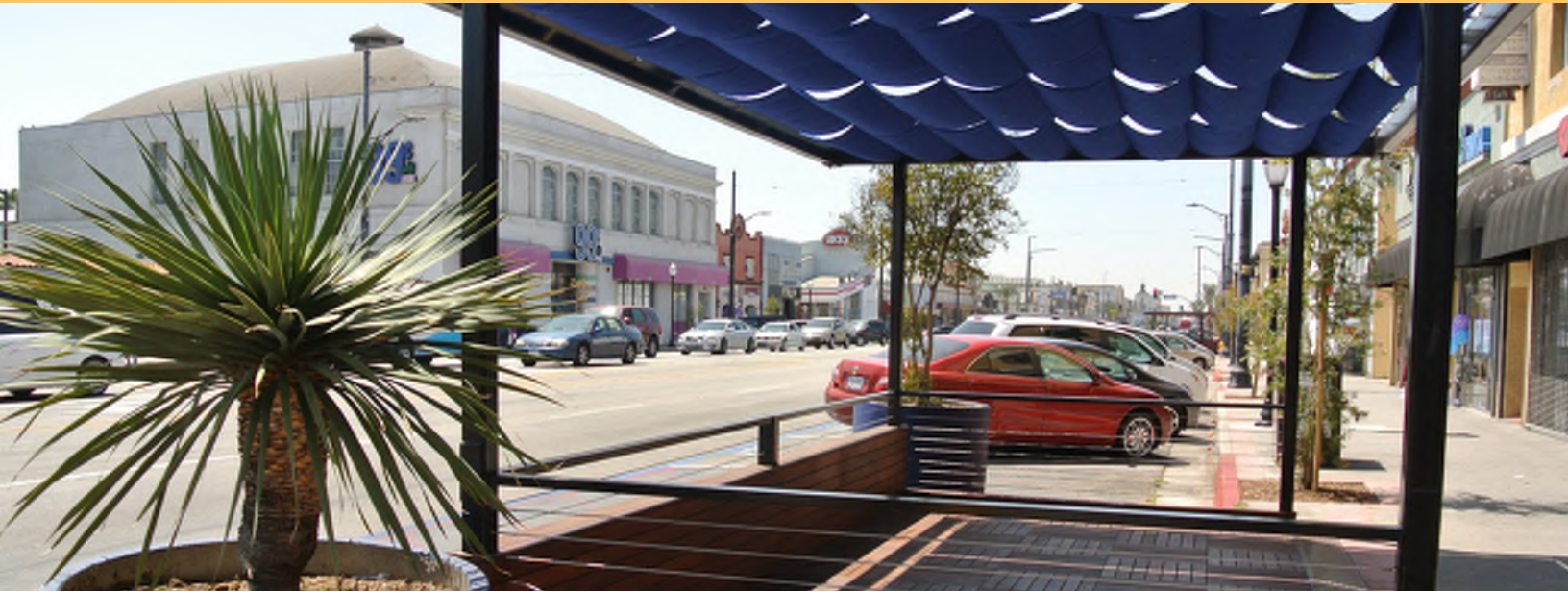
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**City of Huntington Park 2020 Urban Water Management Plan**



LAND USE  
&  
COMMUNITY DEVELOPMENT  
ELEMENT

## 2.1 INTRODUCTION



### SCOPE OF THE LAND USE & COMMUNITY DEVELOPMENT ELEMENT

The City has been largely urban since the Second World War and new development that has taken place in the City involved the redevelopment of existing developed parcels. In 1970, the City's population was 33,482. According to the most recent Census figures, the City's current population is 61,348. This represents an increase of 27,866 persons or 83% in the past five decades. This nearly doubling in population has been absorbed within the City, there were no large areas of vacant land that were developed or no annexations of unincorporated land. This growth occurred without the benefit of expanded or new roadways, new waterlines or sewer facilities, or new open space areas or parks. The underling city service and infrastructure framework essentially is unchanged from the time when the City's population was less than half of the current levels.



The Land Use and Community Development Element serves as a long-range guide for development and planning in the City of Huntington Park and indicates the location and extent of existing and future development throughout the City. The Element identifies those areas where existing and future land uses will be permitted. According to the State planning law, this Element must:

- Designate the distribution, location, and extent of land uses for housing, business, industry, open space, recreation, and public facilities;
- Establish standards of population density and building intensity for each land use category covered by the General Plan; and,
- Identify land uses in those areas subject to development constraints, such as flooding.

The primary objective of the Land Use and Community Development Element is to assist in the management of future growth, to improve the City's physical appearance, and to minimize land use conflicts. Additionally, the State General Plan Guidelines indicate this Element must focus on the following issues:

- Promote a balanced and functional mix of land uses consistent with the community's values;
- Reflect those opportunities and constraints identified in other elements of the General Plan that may affect land use and development; and,
- Assist in reducing the potential for loss of life, injury, property damage, and economic and social dislocation resulting from natural hazards.

This Element also emphasizes sustainable development by coordinating growth and new development in a comprehensive manner so as to avoid incremental and uncoordinated decision making that lacks vision. Growth is targeted in those areas of the City where growth may be accommodated while maintaining the residential neighborhoods, and ensuring quality development.



## RELATIONSHIP TO THE GENERAL PLAN

The Land Use and Community Development Element will serve as a blueprint for land use and development within the City of Huntington Park and sets forth policies and programs concerning physical development within the community. The Element addresses a wide range of issues regarding existing and future development, land use compatibility, the availability of public services and infrastructure, public safety, and the conservation of resources of concern to the community. The scope and content of this Land Use and Community Development Element is governed by State law (Section 65302(a) of the Government Code). According to State law, the policies included in this Element must reflect the policies contained within the other General Plan Elements.

- The Housing Element contains policies for residential development that are considered in the Land Use and Community Development Element.
- The Mobility and Circulation Element provides for the development of a transportation framework that will support the ultimate land uses and development anticipated under the Land Use Plan.
- The Health and Safety Element identifies hazards that need to be considered in future land use planning. This Element is also used as a guide to establish noise mitigation.



## 2.2 BACKGROUND FOR PLANNING



### OVERVIEW OF LAND USE & DEVELOPMENT

Huntington Park was largely developed by the 1930's. As a result, the City is an urbanized community that was essentially fully developed prior to the Second World War. Land use and development characteristics are summarized in below.



- The City contains a variety of uses with residential development being the most extensive type of use. Single-family, medium density, and high density residential are the most dominant type of use in the central portion of the City, which is bounded by Randolph Street to the north, the west of side of Stafford Avenue to the west, Florence Avenue to the South, and Bissell Street to the east. Single-family residential development is also found in the southern portion of the City.





- The northeastern portion of the City is generally occupied by high density residential development. High density residential is generally concentrated west of Rugby Avenue, east of Regent Street, south of Randolph Street, and north of Florence Avenue. In addition, medium density residential is located north of Randolph Street.

- Commercial uses are concentrated along major arterial routes including Pacific Boulevard, Slauson Avenue, Florence Avenue, and Gage Avenue. Neighborhood commercial uses are also located within the southeastern section of the City.



- Industrial uses generally occupy the western portion of the City, with a small pocket located along both sides of the Union Pacific Railroad right-of-way (ROW) in the northeastern section of the City.

**Table 2-1** summarizes the distribution of land uses and development in the City.

**Table 2-1:** Distribution of Existing Land Uses in the City

Land Use Category And Description		Area (in acres)	% of City
Residential (Single Family, Condominiums, Duplex, Triplexes, Fourplexes, and Apartments)		1,543.99	77.8%
Commercial (Lots, Stores, Retail, Gas Stations, Auto Repair, Service Stations)		199.44	8.0%
Industrial (Warehouses/Lumber yard)		65.81	2.6%
Miscellaneous Public Use (Church, Schools, Parks, Auditoriums, Clubs, Lodges, Hospitals, Hotels)		42.7	1.7%
Manufacturing		161.37	4.1%
Clubs and Lodges		5.55	0.2%
Private Utilities		20.81	1.4%
Office Buildings		14.42	0.6%
Vacant (Residential, Commercial, and Industrial)		90.41	3.6%
Total		1,957.34	100.0%
Source: Blodgett Bayless Environmental Planning, 2015.			

## OVERVIEW OF EXISTING RESIDENTIAL DEVELOPMENT

Residential development is the predominant land use in the City. Various sections of the City are occupied by different residential land uses, which are separated by density. The southeast portion of the City is dominated by single-family residential. Single-family uses extend as far north as Gage Avenue and as far south as the City's southern border with South Gate and unincorporated Walnut Park. In addition, single-family residential uses extend as far west as the west side of Passaic Street to Salt Lake Avenue to the east. Medium density residential uses are separated by Randolph Street and extend just north of Gage Avenue. The aforementioned section of medium density residential is bounded by Templeton Street to the west and by the east side of Bissell Street to the east. Three pockets of medium density residential are located between Slauson Avenue to the north and Randolph Street to the south. One last pocket of medium density residential is located north of Slauson Avenue along the north side of 58th Street and extends to the City's northern border with Vernon. High density residential is concentrated within the northeastern portion of the City and to the east and west of the downtown area. The concentration of high density residential located to the east of downtown is generally bounded by Randolph Street to the north, Seville Avenue to the west, Florence Avenue to the south, and the eastern side of Mountain View Avenue to the east. The second concentration of high density residential located to the west of downtown is generally bounded by Randolph Street to the north, Florence Avenue to the south, Rugby Avenue to the east, and Regent Street to the west. One small pocket of high density residential is located north of Florence Avenue, west of Salt Lake Avenue, and south of Saturn Avenue.

## OVERVIEW OF EXISTING COMMERCIAL DEVELOPMENT

Commercial uses are concentrated along major arterial routes including Pacific Boulevard, Slauson Avenue, Florence Avenue, Santa Fe Avenue, and Gage Avenue. Strips of neighborhood commercial uses are located within the southeastern section of the City along both sides of State Street and California Avenue. Pacific Boulevard serves as the City's main commercial thoroughfare. Much of the City's commercial uses are concentrated along Pacific Boulevard, Florence Avenue, and Gage Avenue. The City's Downtown is located along Pacific Boulevard. The Downtown area is bounded on the north by Randolph Street, on the south by Florence Avenue, on the east by



Miles Avenue, and on the west by Rugby Avenue. Strip commercial centers are generally located along Florence Avenue.

## INDUSTRIAL DEVELOPMENT

The City's industrial area is located within the northern and western portion of the City. Industrial land uses extend from the City's northern border with Vernon along Slauson Avenue and 52nd Street, and westerly to the City's border with unincorporated Los Angeles County along Wilmington Avenue. The industrial sector is generally bounded by Santa Fe Avenue, Pacific Boulevard, and the City of Vernon to the east and Randolph Street to the south.

## INFRASTRUCTURE - WATER

The City of Huntington Park is served by four water companies which obtain their supply of water from two sources: groundwater from local wells and water supplied by the Metropolitan Water District. The four water companies are listed below.

- **Maywood Mutual Water Company.** The Maywood Mutual Water Company serves the northeastern portion of the City. The service boundaries extend east to west from Maywood Avenue to the City's border with Maywood, and north to south from Slauson Avenue to Randolph Avenue. Approximately 70% of the Maywood Mutual Water Company's costumers reside in Huntington Park.
- **Walnut Park Mutual Water Company.** The Walnut Park Mutual Water Company serves the odd-numbered side of Walnut Street (addresses 2901-3501 Walnut Street).
- **Golden State Water Company.** The City of Huntington Park is located within the Central Basin West service area of the Golden State Water Company. Golden State Water Company serves the western portion of the City. The service boundaries extend from Slauson Avenue to the north to Florence Avenue to the south, and from the City's western border with Florence-Graham to the west to Alameda Street to the east.



- **Severn Trent Services.** Severn Trent is the City's main provider of water and operates multiple wells in the City, including Well Numbers 12, 14, and 17.

## INFRASTRUCTURE - SEWERS

The City of Huntington Park Public Works Department maintains the City's sewer system. Sewage generated by the City is conveyed to regional sewage treatment facilities maintained and operated by the Los Angeles County Sanitation District (LACSD). Wastewater collected by the LACSD is conveyed to the Joint Water Pollution Control Plant located at 24501 Figueroa Street in Carson. This treatment plant provides primary and secondary treatment for approximately 280 million gallons per day (mgd) and has a total permitted capacity of 400 mgd. Thus, a remaining capacity of 120 mgd is available for future development in the region.

## INFRASTRUCTURE - STORM DRAINAGE

There is minimal flood risk in the City of Huntington Park (Zone X), as indicated in the Federal Emergency Management Agency's Flood Insurance Rate Program. The Los Angeles River Channel is a 500-foot wide concrete channel that is designed to handle the storm water runoff from the Los Angeles area. The river is located north and east of the City approximately 1.90 miles to the east. The maintenance of the river is the responsibility of the Los Angeles County Department of Public Works, Flood Control District. Flooding and inundation hazards are described in the Safety Element. The majority of the storm drains in the City are owned and maintained by the Los Angeles County Flood Control District. The storm drains extend along major arterials and connect directly to the Los Angeles River to the east.

## UTILITIES & COMMUNICATIONS

Natural gas service to the City is provided by the Southern California Gas Company (a subsidiary of SEMPRA Energy) and electricity is provided by the Southern California Edison (SCE) Company. Southern California Gas Company serves more than 21 million residents throughout Central and Southern California. The SCE maintains overhead and underground lines in the City to serve the energy demands of local residents and businesses.



## LIBRARY FACILITIES

The Huntington Park Library is located at 6518 Miles Avenue and is part of the County of Los Angeles Public Library system. The library was first established in 1913 and has relocated three times in the years 1924, 1931, and finally in 1970 to its current location in the Civic Center. The library is approximately 33,482 square feet and has a meeting room with a maximum capacity of 84 persons. Amenities include a children's area, a teen space, a 24-hour book drop, a household battery recycling site, an American Indian resource center, in-person and telephone research assistance, a photocopier, live homework help, a homework center, a family place, story time kits, and a Learning Express Library for teens.



## SCHOOL FACILITIES

The City of Huntington Park is served by the Los Angeles Unified School District, which operates a total of 24 schools in the City. Approximately nine of the public schools in the City are charter schools. The City has a total of ten elementary schools, five middle schools, seven high schools, and two preschool/early education centers. Huntington Park is also within the service boundaries of East Los Angeles Community College (ELAC). **Table 2-2** indicates the address of those schools that currently serve Huntington Park residents.



**Table 2-2: Schools that Serve the City Residents**

School	Address
Aspire Antonio Maria Lugo Academy	6100 Carmelita Ave.
Aspire Olin University Preparatory Academy	2540 East 58 <sup>th</sup> St.
Academia Moderna	2410 Broadway
Alliance Collins Family College-Ready High	2071 Saturn Ave.
Aspire Centennial College Preparatory Academy	2079 Saturn Ave.
Aspire Junior College Academy	6724 South Alameda St.
Aspire Pacific Academy	2565 58 <sup>th</sup> St.
Aspire Titan Academy	6720 South Alameda St.
Chester W. Nimitz Middle School Science/Tech/Math Magnet	6021 Carmelita Ave.
Chester W. Nimitz Middle	6021 Carmelita Ave
Henry T. Gage Middle	2880 East Gage Ave.
Henry T. Gage Middle School Science/Tech/Math Magnet	2880 East Gage Ave
Hope Street Elementary	7560 State St.
Huntington Park Elementary	6055 Corona Ave.
Huntington Park Elementary Dual Language Spanish	6055 Corona Ave.
Huntington Park New Elementary #7 LAUP	6055 Corona Ave.
Huntington Park Senior High	6020 Miles Ave.
Linda Esperanza Marquez High A Huntington Park Institute of Applied Medicine	6361 Cottage St.
Linda Esperanza Marquez High B LIBRA Academy	6361 Cottage St.
Linda Esperanza Marquez High C School of Social Justice	6361 Cottage St.
Lucille Roybal-Allard Elementary	3232 Saturn Ave.
Middleton Cal State Preschool Program	2410 Zoe Ave.
Middleton Primary Center	2410 Zoe Ave.
Middleton Street Elementary	6537 Malabar St.
Miles Avenue Early Education Center	2855 Saturn Ave.
Miles Avenue Elementary	6720 Miles Ave.



**Table 2-2: Schools that Serve the City Residents (continued)**

Miles Avenue Elementary Dual Language Spanish	6720 Miles Ave.
Miles Avenue Elementary Science/Tech/Math Magnet	6720 Miles Ave.
Pacific Boulevard	2660 East 57 <sup>th</sup> St.
PREPA TEC – Los Angeles	2665 Clarendon Ave.
Renuovo Elementary School	3154 East Gage Ave.
Renuovo Leadership Academy	3154 East Gage Ave
San Antonio Continuation	2911 Belgrave Ave.
San Antonio Elementary	6222 State St.
San Antonio Elementary Science/Tech/Math Magnet	6220 State St.
St. Matthias Elementary School	7130 Cedar St.
State Street Early Education Center	3210 Broadway
Source: Los Angeles Unified School District.	

## POLICE & FIRE FACILITIES

Police protection for the City is provided by the Huntington Park Police Department (HPPD) that consists of 57 sworn personnel and 62 civilian employees for a total of 119 full-time employees. The department also has 25 part-time employees. The City of Huntington Park has had police protection since it's incorporation in 1906. The HPPD was relocated twice, once in 1933 following the Long Beach earthquake, and a second time in 1950 upon the completion of the Civic Center. In addition, the City operates a 22 bed Type I Jail which houses unsentenced prisoners prior to their transfer to the County facilities.

The City of Huntington Park contracts its fire serves through the Los Angeles County Fire Department. The Los Angeles County Fire Department operates two fire stations in the City: Fire Station 164, located at 6301 South Santa Fe Avenue, serves as the area's battalion headquarters (Huntington Park is serviced by Los Angeles County Fire Department-Battalion 13); and Fire Station 165, located at 3255 Saturn Avenue.



## 2.3 PLANNING VISION



The City of Huntington Park, with the implementation of the Land Use and Community Development Element, seeks to promote an orderly pattern of quality future development to achieve a complete and controlled balance of growth among land uses. The following objectives will be realized through the implementation of the policies and programs contained in the Land Use and Community Development Element:

- To promote orderly development within the City while, at the same time, ensuring that sustainability is the cornerstone of this future development;
- To provide for a variety of housing opportunities for all residents of the City of Huntington Park;
- To maintain and conserve the existing residential neighborhoods in the community while providing for a variety of housing opportunities for all residents;
- To increase employment opportunities in the City;



- To promote the development of a wide range of commercial uses to meet the needs of the local and regional marketplace;
- To ensure a strong industrial and commercial tax base to finance public improvements and services; and,
- To promote quality design and sustainable development along the City's major commercial corridors.

The City's adopted land use and sustainability policies are outlined in the section that follows. The policies are arranged under each of the issue areas discussed above. The following policies will establish the policy framework for the Land Use and Community Development Element.

## LAND USE & COMMUNITY DEVELOPMENT ELEMENT POLICIES

### ISSUE: LAND USE DIVERSITY

- **Land Use & Community Development Element Policy 1.** The City of Huntington Park shall maintain and preserve those industrial and commercial areas of the City while preventing land use conflicts through comprehensive land use planning and environmental review.
- **Land Use & Community Development Element Policy 2.** The City of Huntington Park shall promote mixed-use development (residential, retail, and commercial uses) in key activity areas of the City as indicated on the Land Use Policy Map.
- **Land Use & Community Development Element Policy 3.** The City of Huntington Park shall continue to support the development of senior housing in locations with convenient access to commercial uses, services, and public transportation.
- **Land Use & Community Development Element Policy 4.** The City of Huntington Park shall continue to permit single room occupancy (SROs) uses in the Central Business District and SRO/Commercial Mixed Use Overlay as a means to provide affordable housing.



## ISSUE: NEW DEVELOPMENT & LAND USE COMPATIBILITY

- **Land Use & Community Development Element Policy 5.** The City of Huntington Park shall require that multi-family development provide adequate buffers (such as decorative walls and landscaped setbacks) to prevent impacts on surrounding neighborhoods due to noise, traffic, parking, light and glare, and differences in scale as a means to ensure privacy and to provide visual compatibility.
- **Land Use & Community Development Element Policy 6.** The City of Huntington Park shall require that new developments are properly designed to minimize potential land use conflicts and environmental impacts.
- **Land Use & Community Development Element Policy 7.** The City of Huntington Park shall ensure that new industrial development does not lead to any environmental impacts related to contamination, excessive noise, air pollution, and truck traffic.
- **Land Use & Community Development Element Policy 8.** The City of Huntington Park shall develop and implement an amortization program to require legal non-conforming uses to meet current building code and zoning requirements.

## ISSUE: EXPANSION & DIVERSIFICATION OF ECONOMIC BASE

- **Land Use & Community Development Element Policy 9.** The City of Huntington Park shall encourage the growth and expansion of local businesses through a streamlined permit approval processes.
- **Land Use & Community Development Element Policy 10.** The City of Huntington Park shall actively promote the City as a place for businesses to locate through marketing, advertising, and cooperation with the local Chamber of Commerce.



- **Land Use & Community Development Element Policy 11.** The City of Huntington Park shall target certain businesses and industries that will benefit the local market.
- **Land Use & Community Development Element Policy 12.** The City of Huntington Park shall maintain, market, and further develop the Pacific Boulevard corridor as a regional retail destination.

## ISSUE: URBAN DESIGN

- **Land Use & Community Development Element Policy 13.** The City of Huntington Park shall require that new and rehabilitated residential, commercial, and light industrial development located adjacent to pedestrian and recreational amenities provide linkages to those amenities including ground-level access; pedestrian-oriented ground-floor uses; and locating on-site parking away from pedestrian-oriented areas.
- **Land Use & Community Development Element Policy 14.** The City of Huntington Park shall oversee the preparation of urban design guidelines that, together with the City's Zoning Ordinance, will serve as a design guide for new development and rehabilitation.
- **Land Use & Community Development Element Policy 15.** The City of Huntington Park shall establish a consistent design vocabulary for all public signage, including fixture type, lettering, colors, symbols, and logos.
- **Land Use & Community Development Element Policy 16.** The City of Huntington Park shall locate distinctive public signage and landscaping for key entry points into the City and will require that signage on commercial structures be compatible and integrated with the surrounding area.

## ISSUE: REVITALIZATION AND NEW DEVELOPMENT

- **Land Use & Community Development Element Policy 17.** The City of Huntington Park shall use various land use and development incentives to facilitate the revitalization of underutilized or blighted properties consistent with the adopted land use map..



- **Land Use & Community Development Element Policy 18.** The City of Huntington Park shall continue to require property maintenance through continued Code Enforcement efforts.
- **Land Use & Community Development Element Policy 19.** The City of Huntington Park shall continue to pursue funding sources to assist in the implementation of existing residential and commercial rehabilitation programs.
- **Land Use & Community Development Element Policy 20.** The City of Huntington Park shall continue to encourage the restoration and rehabilitation of properties eligible for inclusion on the National Register of Historic Places and will support tax credit incentives of the National Trust for Historic Preservation.

## ISSUE: DEVELOPMENT AND PUBLIC SERVICES

- **Land Use & Community Development Element Policy 21.** The City of Huntington Park shall require that new development(s) pay their “Fair Share” for the provision of the necessary infrastructure and other support services that will be required to serve the development.
- **Land Use & Community Development Element Policy 22.** The City of Huntington Park shall work with the Huntington Park Police Department and the Los Angeles County Fire Department to ensure that sufficient resources continue to be available to meet the existing and projected service demands.
- **Land Use & Community Development Element Policy 23.** The City of Huntington Park shall require all new development, including commercial, industrial, and residential development to install fire protection systems, including automatic sprinkler systems.
- **Land Use & Community Development Element Policy 24.** The City of Huntington Park shall enhance public crime prevention awareness through the development of new or expanded educational programs (in both Spanish and English) that address personal safety awareness, neighborhood watch programs, and taking into account public safety in the design of new developments.



## ISSUE: DEVELOPMENT AND PUBLIC SERVICES

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- **Land Use & Community Development Element Policy 24.** The City of Huntington Park shall enhance public crime prevention awareness through the development of new or expanded educational programs (in both Spanish and English) that address personal safety awareness, neighborhood watch programs, and taking into account public safety in the design of new developments.

## ISSUE: INTERAGENCY COORDINATION AND COOPERATION

- **Land Use & Community Development Element Policy 25.** The City of Huntington Park shall cooperate with surrounding jurisdictions in the review and implementation of larger development projects in the region.
- **Land Use & Community Development Element Policy 26.** The City of Huntington Park shall work with public agencies in the region so as to avoid the duplication of services.
- **Land Use & Community Development Element Policy 27.** The City of Huntington Park shall coordinate with the Los Angeles Unified School District as it expands and upgrades existing educational facilities.



- **Land Use & Community Development Element Policy 28.** The City of Huntington Park shall work with the library system to identify the service needs.

## ISSUE: INFRASTRUCTURE

- **Land Use & Community Development Element Policy 29.** The City of Huntington Park shall work closely with local water purveyors in determining future area needs to identify and implement water conservation programs.
- **Land Use & Community Development Element Policy 30.** The City of Huntington Park shall ensure that adequate water and sewer service is available as new development occurs.
- **Land Use & Community Development Element Policy 31.** The City of Huntington Park shall continue to require the use of drought-resistant landscaping to reduce water use.
- **Land Use & Community Development Element Policy 32.** The City of Huntington Park shall strive to correct identified storm drain deficiencies and develop a long-range program for replacing aging drainage system components.

## ISSUE: SOLID WASTE COLLECTION, DISPOSAL, & RECYCLING

- **Land Use & Community Development Element Policy 33.** The City of Huntington Park shall work closely with the County of Los Angeles and other responsible agencies so as to reduce solid waste generated in the City.
- **Land Use & Community Development Element Policy 34.** The City of Huntington Park shall explore the creation of City-managed recycling drop-off stations in the City. The new recycling stations must adhere to all City Codes and requirements.



- **Land Use & Community Development Element Policy 35.** The City of Huntington Park shall encourage waste reduction, recycling, and use of recycled materials within City government.
- **Land Use & Community Development Element Policy 36.** The City of Huntington Park shall encourage composting as an alternative to disposal for solid wastes.

## LAND USE & COMMUNITY DEVELOPMENT PROGRAMS

The following programs will implement the policies outlined in the previous section.

- **Building Code Review Program.** The City of Huntington Park will periodically review, and if necessary, update the Uniform Building Code (UBC) to reflect current technology and regulations. This review will be undertaken by designated individuals to identify appropriate changes to the UBC that should be considered. Amendments to the City's building code will then be made, as appropriate. This program's implementation strategy is summarized below:
  - **Source of Funding:** General Fund or other available resources.
  - **2019-2024 Program Objectives:** To undertake an annual review.
  - **Agency Responsible for Implementation:** Community Development Department.
  - **Implementation Schedule:** The program is ongoing and will be continued.
- **Capital Improvement Planning.** The City's Capital Improvement Program (CIP) is a five-year plan that indicates the timing of major capital expenditures. Individual projects are reviewed and ranked on an annual basis and may include streetscape upgrades, installation of traffic signals, slurry seal for streets, sidewalk repair, and sewer line upgrades. The City will continue to update, review, and implement its CIP to consider transportation-related improvements. This program's implementation strategy is summarized below:



- **Source of Funding:** General Fund or other available resources.
  - **2019-2024 Objectives:** To review and update the CIP
  - **Agency Responsible for Implementation:** Community Development Department.
  - **Implementation Schedule:** The program is ongoing and will be continued.
- **Code Enforcement.** Code enforcement is an integral part of the City's efforts to improve the appearance of substandard structures, properties, and signage. Community code enforcement efforts (funding and staffing) will continue to be the primary means to ensure that properties are well maintained. The objective of the City's Code Enforcement Program, in regard to housing, is to bring substandard units into compliance with City codes. Potential code violations are identified based on exterior windshield surveys and complaints reported to the City. The City's Code Enforcement Officers work closely with the Community Development staff and property owners to identify units in need of housing assistance. In order to address the continuing problem of illegal units, the Code Enforcement Officer surveys the City to identify such units, notifies property owners that they are in violation of City law, and enforces the steps necessary to bring their properties into compliance with City codes. These efforts result in improved maintenance of housing units throughout the City. Property owners are also informed of any rehabilitation loans or grants that are available as a means to correct code violations. This program's implementation strategy is summarized below:
    - **Source of Funding:** General Fund or other available resources.
    - **2019-2024 Program Objectives:** To maintain the existing service level
    - **Agency Responsible for Implementation:** Community Development Department.
    - **Implementation Schedule:** The program is ongoing and will be continued.



- **Design Guidelines and Review.** The City shall continue to implement its current design review procedures. The purpose of the design review process is to ensure that building design, architecture, and site layouts are compatible with surrounding development. The design review process is an important component of development review. This process may be used to consider a potential development's impact on the architectural integrity of historically significant structures and sites. This program's implementation strategy is summarized below:
  - **Source of Funding:** General Fund or other available resources.
  - **2019-2024 Program Objectives:** To complete design guidelines for the areas plans by 2020.
  - **Agency Responsible for Implementation:** Community Development Department.
  - **Implementation Schedule:** he program will commence at the adoption of the General Plan.
- **Environmental Review.** The City shall continue to evaluate the environmental impacts of new development and provide mitigation measures prior to development approval, as required by the California Environmental Quality Act (CEQA). Environmental review shall be provided for major projects, as well as those that will have the potential to adversely impact the environment. Land use and development are among the issue areas that will be addressed in the venvironmental analysis. In compliance with CEQA, the City shall also assign responsibilities for the verification of the implementation of mitigation measures that may be recommended as part of the environmental review process. This program's implementation strategy is summarized below:
  - **Source of Funding:** General Fund or other available resources.
  - **2019-2024 Objectives:** To maintain the existing service level
  - **Agency Responsible for Implementation:** Community Development Department.
  - **Implementation Schedule:** The program is ongoing and will be continued.



- **Nonconforming Ordinance.** The City shall review, and if required, revise its Nonconforming Ordinance on an ongoing basis to ensure that it meets the current objectives of the community. The initial step will require City staff to review the existing Nonconforming Ordinance. Staff shall prepare a report that will be submitted to the City council and planning commission describing provisions of the ordinance and any problems that have been experienced related to its implementation. This program's implementation strategy is summarized below:
  - **Source of Funding:** General Fund or other available resources.
  - **2019-2024 Program Objectives:** To maintain the existing service level
  - **Agency Responsible for Implementation:** Community Development Department.
  - **Implementation Schedule:** The program is ongoing and will be continued.
- **Zoning Conformity Program.** The City will continue to review the zoning ordinance and map to ensure that the development standards are consistent with those identified in the Land Use and Community Development Element. The City will also initiate appropriate changes to the zoning map to ensure conformity between the Land Use and Community Development Element and zoning map. This program's implementation strategy is summarized below:
  - **Source of Funding:** General Fund and Community Development Block Grant (CDBG).
  - **2019-2024 Program Objectives:** To maintain the existing service level
  - **Agency Responsible for Implementation:** Community Development Department.
  - **Implementation Schedule:** The program is ongoing and will be continued.



## 2.4 PLANNING IMPLEMENTATION



The land use map (**Exhibit 2-1**) indicates the location and extent of permitted development in the City. With the City of Huntington Park completely urbanized (the City's current population is 61,348), the land use map's focus is on the conservation, maintenance, the rehabilitation of existing development, and the identification of opportunities for redevelopment in the City. California planning law calls for conformity between the land use map and the zoning map. This consistency provision is important, since the zoning ordinance serves as the primary implementation tool of the Land Use and Community Development Element. State law indicates that local governments have a "reasonable amount of time" to amend their zoning ordinance to ensure consistency. The majority of the earlier inconsistencies between the City's General Plan and zoning map were resolved as part of the previous General Plan update. The Land Use and Community Development Element, through this update, focuses on those areas where there is an opportunity for a change in land use and development. The focus of the City's future planning efforts relative to land use and development will be directed toward accomplishing the following objectives:

- To retain the existing desirable land uses while providing for a more compatible land use pattern in the City;
- To ensure that the land use map accurately reflects the development and land use objectives of the community;



- To make sure the boundaries for the various land use designations correspond to the boundaries of the various zone districts to ensure consistency; and,
- To correct any potential inconsistencies between the land use plan and the zoning map.

## LAND USE DESIGNATIONS

The Land Use and Community Development Element indicates the location and extent of development and land uses throughout the City. The land use categories, or “designations,” indicate the type of development that is permitted for specific areas of the City. State law requires that these land use designations include a description of standards for *development intensity* and *population density*. The reason for these standards is to ensure that the types of development permitted under the various land use designations are understood by the public, decision-makers, property owners, and prospective developers. According to the California General Plan Guidelines, the land use map is a spatial representation of the City’s land use policy. The map meets the State’s requirement (Section 65302(a)) that calls for...

*“...the designation of the proposed general distribution and general location and extent of the uses of the land for housing, business, industry, open space, including agriculture, natural resources, recreation, and enjoyment of scenic beauty, education, public buildings and grounds, solid waste and liquid waste disposal facilities, and other categories of public and private land use.”*

## BASE GENERAL PLAN AND ZONING DISTRICTS

The Huntington Park Zoning Code and Zoning Map are the primary implementation ordinances of the Land Use and Community Development Element. The zoning map and ordinance indicate the specific land uses allowed in the City and establish regulations and standards for use and development. The City’s Zoning Code consists of eight base zone districts that include the following: R-L, R-M, R-H, C-P, C-N, C-G, MPD, and OS. The major base zone districts that regulate land uses and development are listed below:



- **Residential Development.** Three zones, R-L, R-M, and R-H, are applicable to residential development. The R-L (Residential, Low) zone generally applies to single-family detached residential development. The R-M (Residential, Medium) zone generally applies to higher density single-family residential development, duplexes, and lower density multiple-family developments. Finally, the R-H (Residential, High) zone applies to higher density multiple-family developments.
- **Commercial Development.** Three zones, C-P, C-N, and C-G, are applicable to commercial development. The C-P (Commercial, Professional) zone generally applies to office, medical, and professional services. The C-N (Commercial, Neighborhood) zone generally applies to small neighborhood-serving commercial and retailing uses. Finally, the C-G zone applies to larger commercial centers and districts.
- **Industrial Development.** A single zone, MPD, Industrial Planned Development is applicable to industrial development.

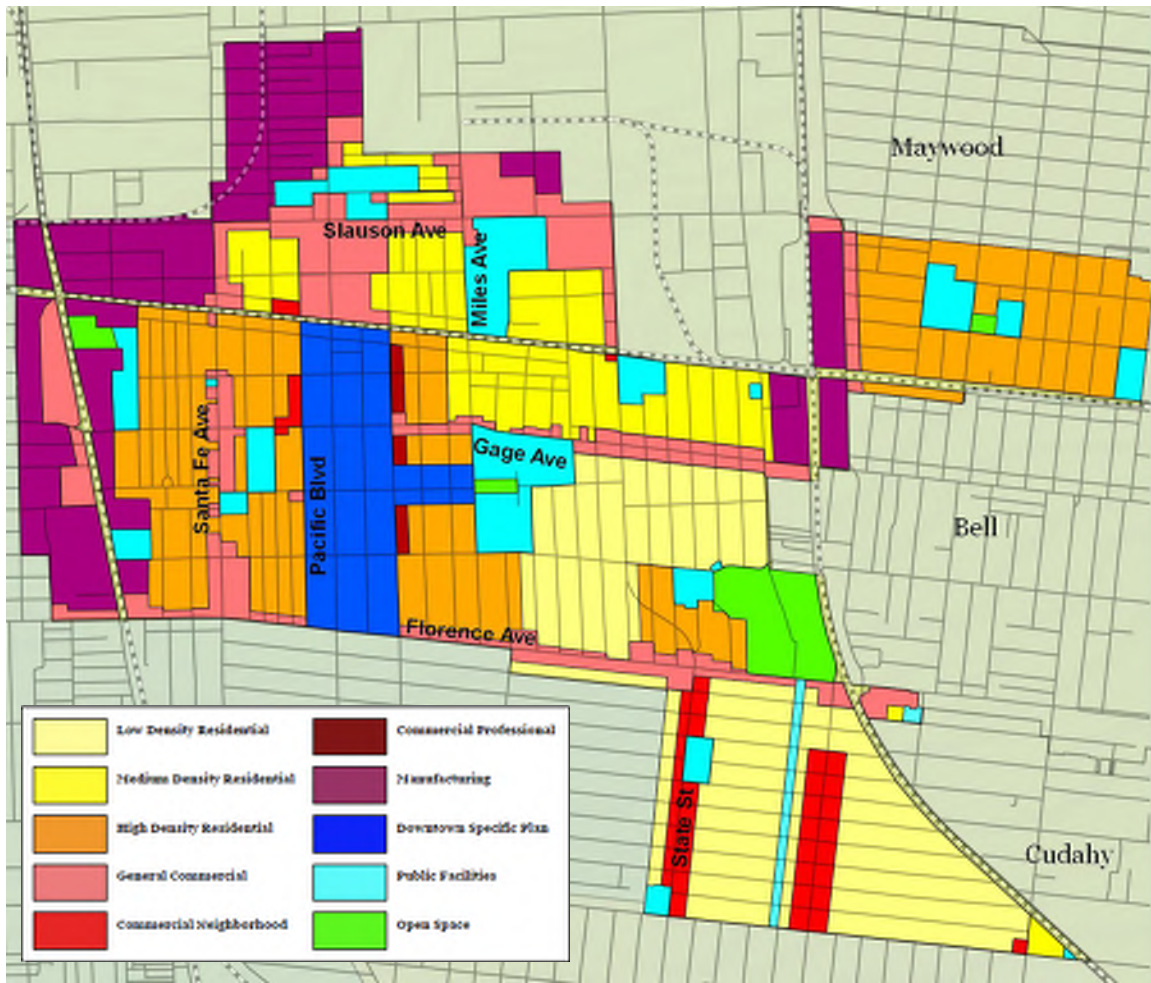
**Table 2-3:** City of Huntington Park Land Use Designations

Zone (General Plan Designation)	Uses	Density (DUs/Ac. or FAR)	Min. Lot Size	Min. Lot Coverage	Max. Height
R-L (Residential, Low)	Single-family	8.7 DUs/Ac.	5,000 sq. ft.	45%	35 ft.
R-M (Residential, Medium)	Single-family, Duplex	17.4 DUs/Ac.	5,000 sq. ft.	55%	35 ft.
R-H (Residential, High)	Condominiums, Apartments	29.0 DUs/Ac.	5,000 sq. ft.	65%	45 ft.
C-P (Commercial Professional)	Offices, Medical, Services	1 to 1 FAR	5,000 sq. ft.	None	40 ft.
C-N (Commercial, Neighborhood)	Small Commercial	1 to 1 FAR	5,000 sq. ft.	None	30 ft.
C-G (Commercial, General)	Retail and Commercial	1 to 1 FAR	5,000 sq. ft.	None	40 ft.
MPD (Industrial Planned Dev.)	Manufacturing	2 to 1 FAR	5,000 sq. ft.	None	None
OS (Open Space)	Incidental to Primary Use	None	None	None	None

Source: Huntington Park Zoning Code, 2016



## Exhibit 2-1: A Generalized Land Use Map of the City



**Exhibit 2-1** is land use map indicating the location and extent of permitted development and land uses in the City.

## OVERLAY ZONE DISTRICTS

In addition to the aforementioned base zone districts, the City of Huntington Park Zoning Code includes a number of *overlay zones*. Overlay zoning is a regulatory tool that creates a special zoning district, placed over an existing base zone that identifies special provisions in addition to those in the underlying base zone. An overlay zone can share common boundaries with the base zone or cut across base zone boundaries. Special regulations or incentives are included in the overlay zone to facilitate certain regulations in the geographic area that is subject to the overlay zone. The overlay zones included in the City of Huntington Park Zoning Code are outlined below:

- **Medium Density Overlay Zone.** The purpose of this overlay zoning district is to provide for multi-family residential units up to 17.42 units per acre within the underlying commercial zoning district. The Medium Density Overlay zoning district identifies parcels that are suitable for the development of medium density housing, either as the primary use on the parcel or in conjunction with other uses.
- **Parking Overlay Zone.** The purpose of this overlay zoning district is to provide for the identification of areas where private owners and/or the City are encouraged to acquire property for off-street parking facilities. The Parking Overlay Zone designates parcels which are suitable for off-street parking facilities.
- **Senior Citizen Housing Overlay Zone.** The purpose of this overlay zoning district is to provide for senior citizen housing at up to 225 dwelling units per acre, generally located in high-rise developments with shared open space, meeting facilities, and reduced parking requirements. Single Room Occupancy (SRO) facilities are also allowed at up to 400 units per acre.
- **Single Room Occupancy Overlay Zone.** The purpose of this overlay zoning district is to provide for alternative types of residential living opportunities to help meet the needs of the community. All Single Room Occupancy (SRO) facilities allowed under this overlay zoning district shall be developed/operated in compliance with the provisions/standards contained in Chapter 3, Article 1 (Single Room Occupancy Facilities).



- **Special Use Overlay Zone.** The purpose of this overlay zoning district is to accommodate adult-oriented businesses in certain areas of the City while minimizing the negative secondary effects, to the extent feasible, on surrounding areas.
- **Affordable Housing Overlay Zone.** The purpose of this zoning district is to facilitate the development of affordable family housing at densities up to seventy (70) dwelling units per acre. Senior citizen housing at a density of 225 units per acre and single room occupancy (SRO) facilities at a density of 400 units per acre is also permitted.
- **Historic District Overlay District.** The purpose of this zoning district is to preserve historic structure within this area of the City, and facilitate the development of affordable family housing at densities up to seventy (70) dwelling units per acre. Senior citizen housing at a density of 225 units per acre and single room occupancy (SRO) facilities at a density of 400 units per acre is also permitted.

The City's overlay zones are summarized in **Table 2-4**.



**Table 2-4:** City of Huntington Park Zoning Ordinance, Special, & Overlay Zones

Zone	Uses	Density (DUs/Ac. or FAR)	Min. Lot Size	Min. Lot Coverage	Max. Height
Medium Density Overlay Zone	Medium Density Housing	17.424 DUs/Ac.	5,000 sq. ft.	55%	35 ft.
Parking Overlay Zone	Off-Street Parking	None	None	None	None
Special Use Overlay Zone	Adult Use Overlay	1 to 1 FAR	5,000 sq. ft.	None	None
Affordable Housing Overlay Zone	Affordable Housing	70 DUs/Ac.	The Base Zone regulations will apply.		
	Senior Housing	225 DUs/Ac.			
	SRH Housing	400 DUs/Ac.			
Historic District Overlay Zone	Preserve historic districts.	The Base Zone regulations will apply.			
Source: Huntington Park Zoning Code, 2015.					

## SPECIFIC PLAN

The City has adopted a single specific plan, the Downtown Specific Plan (DTSP), which is applicable to the central business district or downtown. The purpose of the DTSP is to create a unique and identifiable downtown area for Huntington Park that is an economically vibrant, pedestrian-oriented destination. The DTSP builds upon and refines, economic development strategies developed specifically for the downtown area focusing on beautification of public spaces and streetscapes and storefront. An overall goal of the DTSP is the orderly development of downtown area consistent with the City's General Plan along with the community's vision for the area.

The DTSP covers an area of approximately 85 acres in the City of Huntington Park's Downtown. The DTSP area extends from Randolph Street in the north to Florence Avenue in the south. The eastern boundary is generally Seville Avenue, except for an area that extends along Zoe Avenue to Miles Avenue, and the western boundary is Rugby Avenue. Pacific Boulevard occupies the central portion of the DTSP area and is considered the City's Central Business District. The DTSP divides the downtown area into four Districts (refer to **Exhibit 2-2**). Within each District there is particular vision for future development. Land use and development standards, as well as

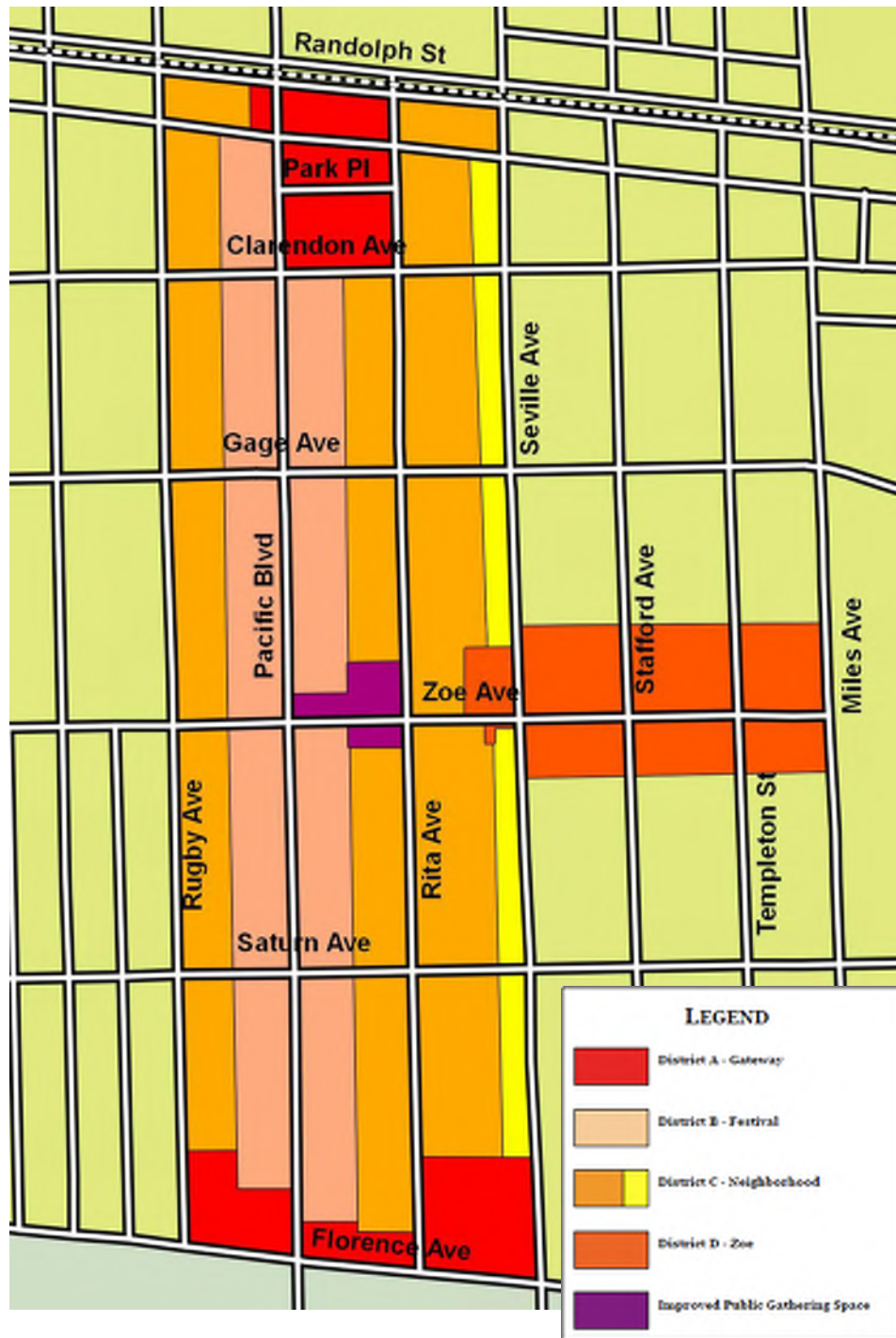
design guidelines, give direction for each of these Districts to achieve the future state envisioned by the community. The four Districts are as follows:

- **District A – Gateway.** District A encompasses parcels at the intersections of Randolph Street with Pacific Boulevard and Rita Avenue and Florence Avenue with Rugby Avenue, Pacific Boulevard, Rita Avenue, and Seville Avenue.
- **District B – Festival.** District B encompasses all parcels fronting on Pacific Boulevard, except those parcels at the intersections with Randolph Street and Florence Avenue contained in District A as described above.
- **District C – Neighborhood.** All parcels between Rugby Avenue and Seville Avenue that are not included in District A or District B are part of District C, except for select parcels at the intersection of Seville Avenue and Zoe Avenue.
- **District D – Zoe.** District D encompasses those parcels bordering Zoe Avenue from the alley separating Rita Avenue and Seville Avenue to the intersection with Miles Avenue.

The DTSP offers methods to identify, preserve, and restore architecturally significant buildings while promoting clean, organized, and attractive merchandise display areas, storefronts, and building signage in order to prompt a stronger local identity and to beautify the area. New street improvements, including enhanced paving patterns and a cohesive collection of street furnishings, integrate with an effective way-finding system to create a unique commercial destination. In addition, new development standards provide opportunities for development to occur and thrive while design guidelines encourage and promote quality development. It is the City's intent through this planning and design assignment to continue revitalization trends, set forth a vision for this unique area, and provide an implementation strategy that is creative, realistic, and attractive to private investment.



## Exhibit 2-2: Map of the Downtown Specific Plan (DTSP)



## TARGET AREAS FOR TRANSIT ORIENTED DEVELOPMENT (TODs)

### Exhibit 2-3: Map of the TOD Target Areas



## Exhibit 2-4: TOD Area 1 Map



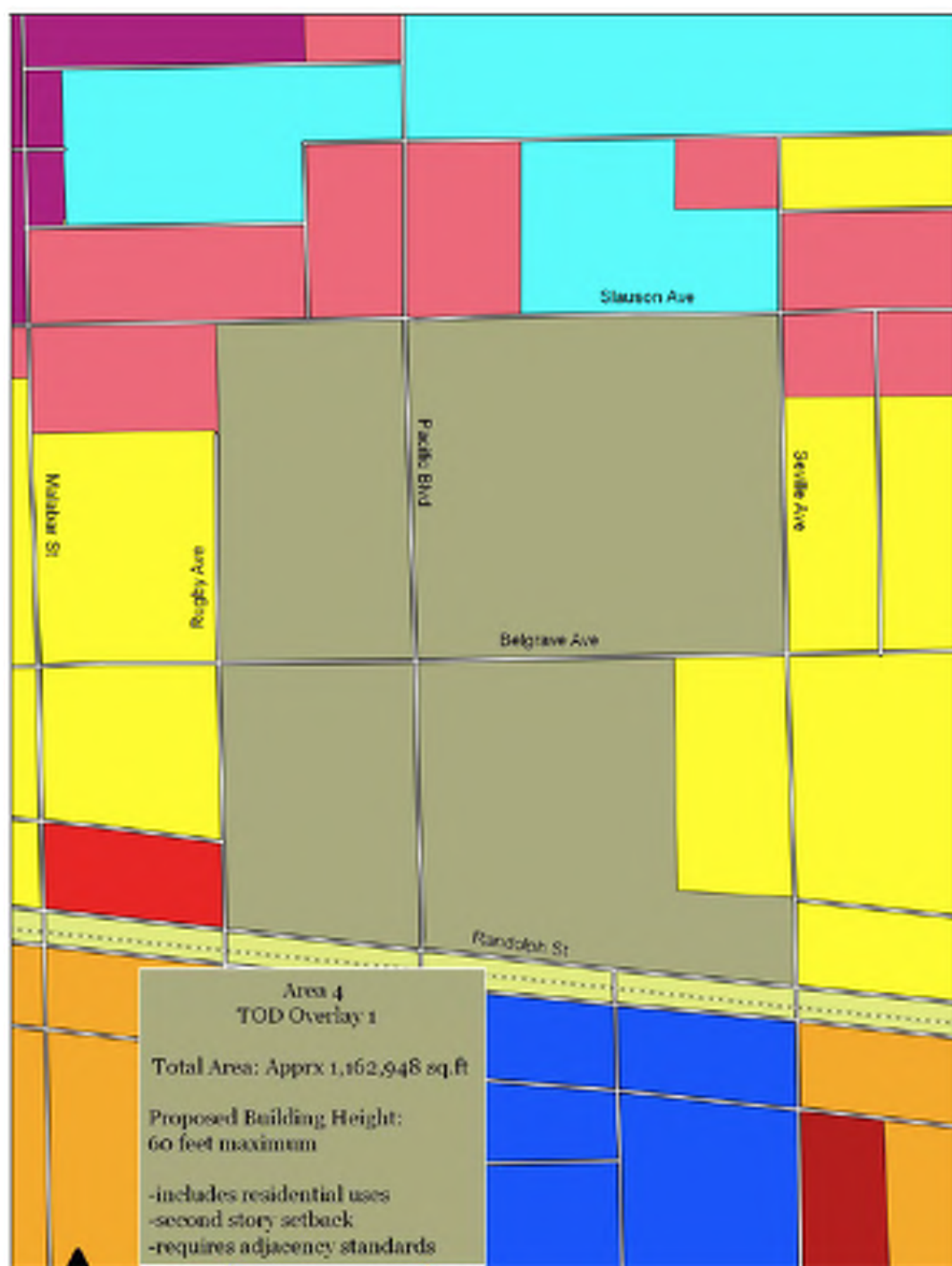
## Exhibit 2-5: TOD Area 2 Map



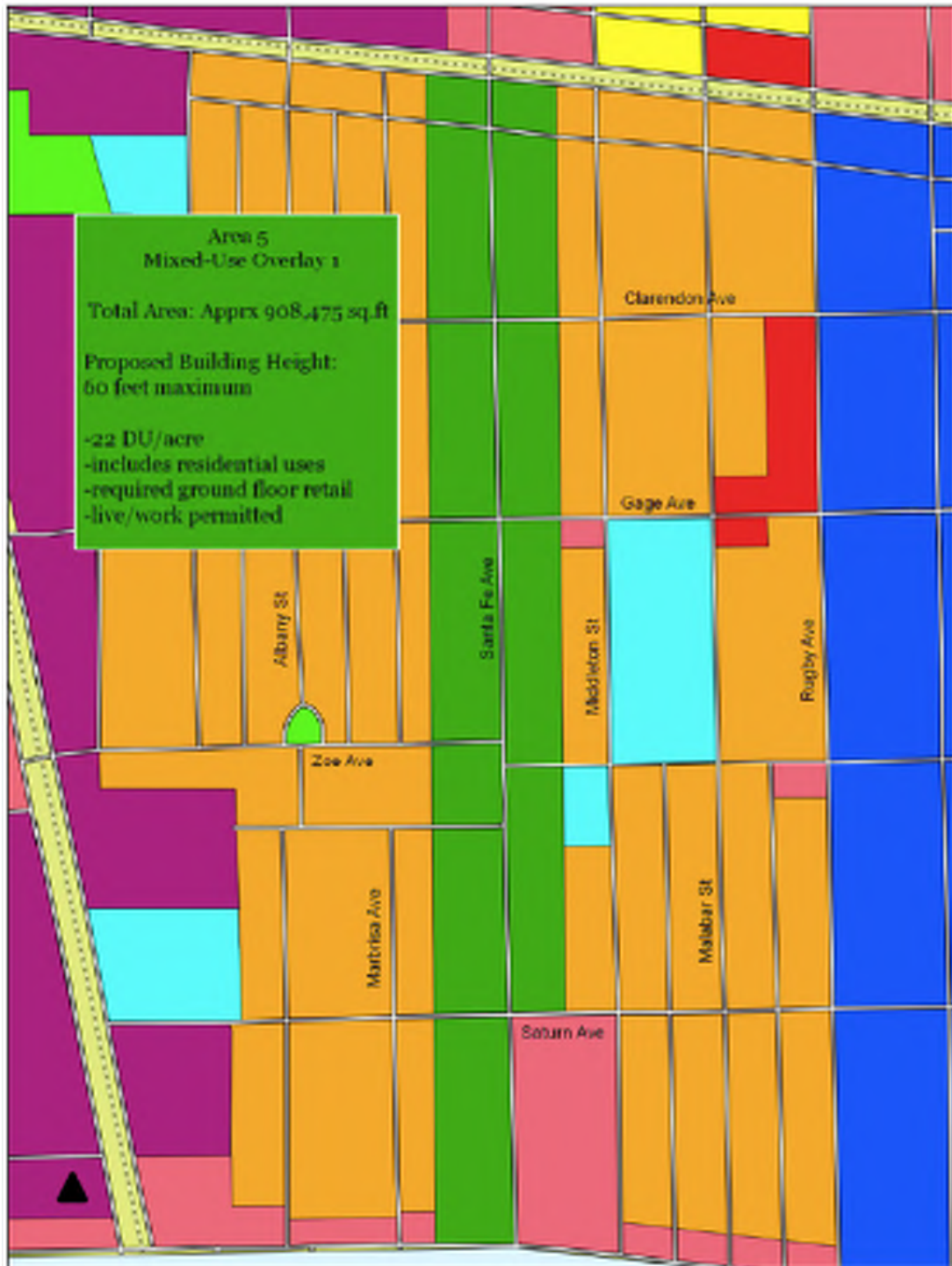
## Exhibit 2-6: TOD Area 3 Map



## Exhibit 2-7: TOD Area 4 Map



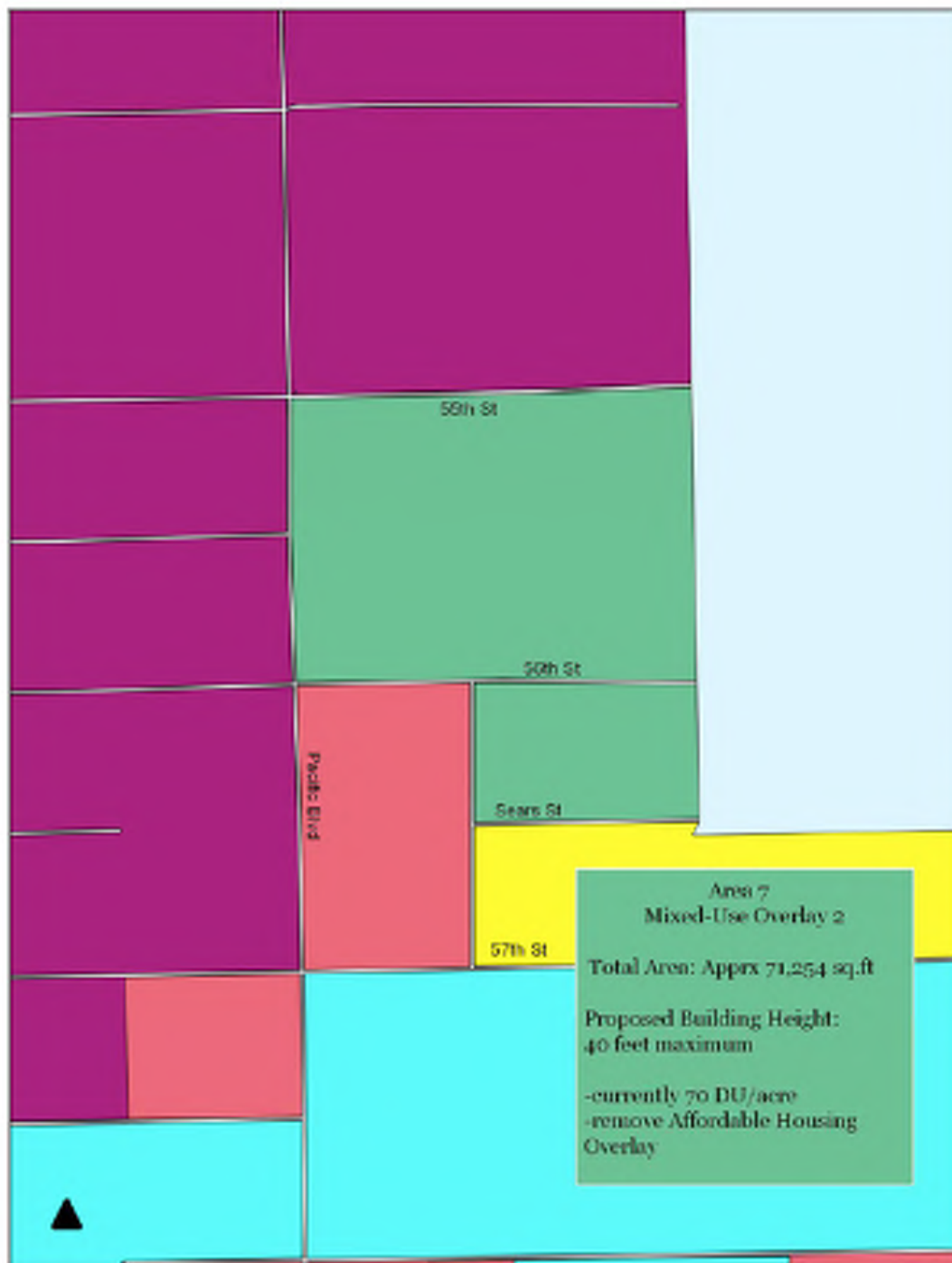
## Exhibit 2-8: TOD Area 5 Map



## Exhibit 2-9: TOD Area 6 Map



## Exhibit 2-10: TOD Area 7 Map



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## **Appendix I: 2013-2021 Housing Element 2030 City General Plan**

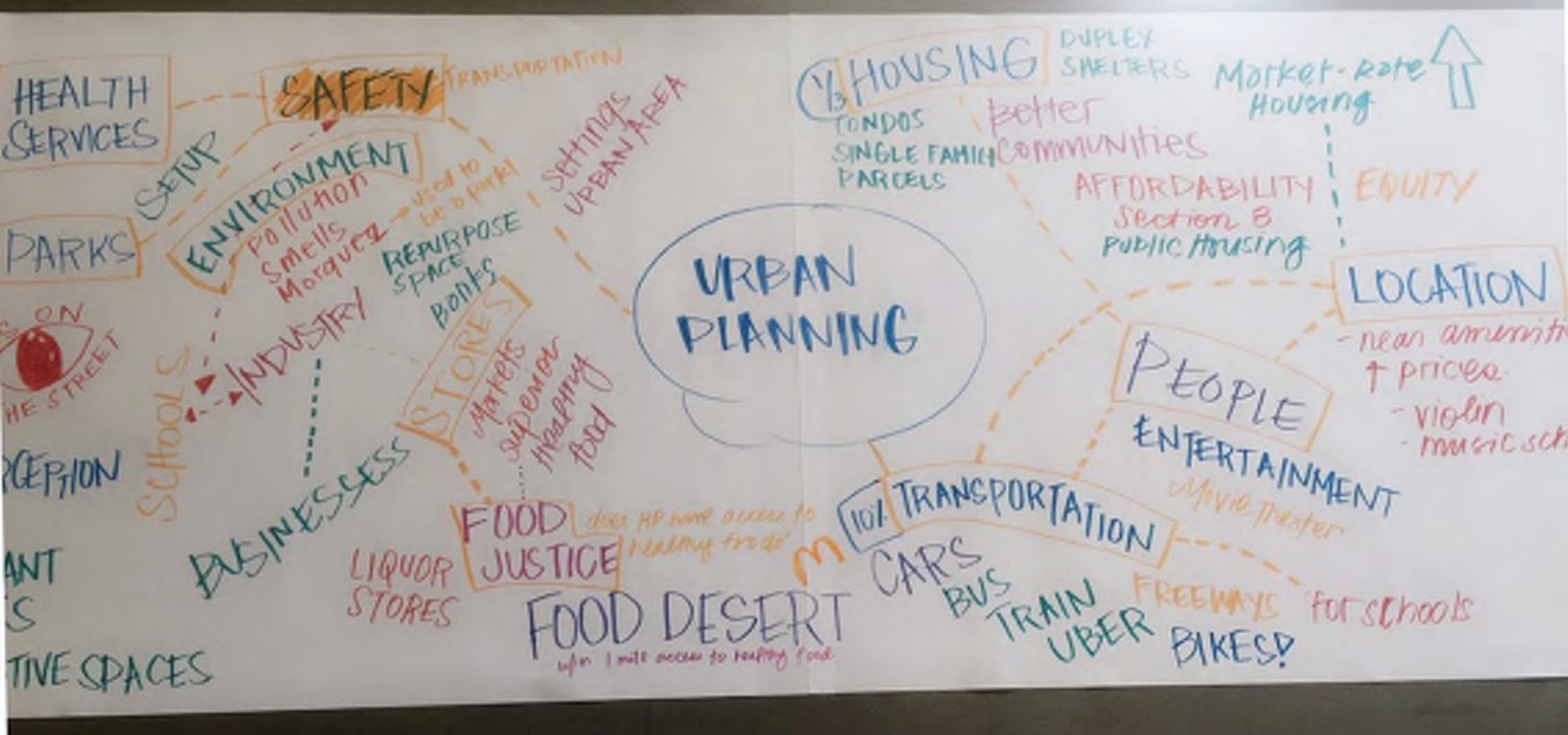
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**City of Huntington Park 2020 Urban Water Management Plan**

# HOUSING ELEMENT



# 6.1 INTRODUCTION



## SCOPE OF THE HOUSING ELEMENT

The State of California requires that all local governments (both cities and counties) prepare and maintain housing elements to identify strategies to conserve, rehabilitate, and provide housing to meet the existing and future needs of the community. Specific requirements concerning the scope and content of housing elements have been established by the State Legislature. The Department of Housing and Community Development (HCD) is the State Agency that is responsible for ensuring State housing law being implemented at the local level. The responsibility of HCD involves reviewing and certifying housing elements prepared by local governments. The State housing element requirements are designed to address the following concerns:

- Local governments must recognize their responsibility in contributing to the attainment of the State's housing goals.



- Local governments must prepare and implement housing elements that are coordinated with State and Federal efforts in providing opportunities for new housing.
- Local governments must cooperate with other agencies and governments to address regional housing needs.
- This Housing Element also evaluates the current Regional Housing Needs Assessment (RHNA) developed by the Southern California Association of Governments (SCAG) and indicates how the City intends to accommodate the future housing demand identified by the RHNA. The RHNA calls for an additional 895 units to be provided during the 2013-2021 planning period.

While the City's development patterns were well established in the decades preceding the Second World War, the availability of housing remains one of the key planning issues in the community. New higher density development has occurred over the past several decades. The challenges the City will face in the coming years include the following:

- The availability of land for new housing development in the City is limited/ Huntington Park is fully developed and any new housing construction will consist of infill development.
- The majority of the City's land area is already developed as residential. The challenge in the future will be to retain the balance between the residential neighborhoods and the commercial and industrial areas.
- The character of the City's housing stock has undergone significant changes in the past five decades. Neighborhoods that were once largely single-family following the Second World War have undergone redevelopment to much higher densities.
- The elimination of redevelopment has had a dramatic impact on the City's ability to raise revenue for new housing programs and to assemble parcels for new residential development.



This Element consists of the following three sections:

- The *Introduction* provides an overview of the Housing Element and describes the statutory authority related to its implementation.
- The *Background Report* in this section describes the demographic, housing, socioeconomic, and employment characteristics of Huntington Park. The background analysis also describes the market, governmental, and environmental constraints that may affect housing production in the City during the 2013-2021 planning period.
- The *Housing Plan* indicates those citywide goals and programs that will conserve and maintain existing housing in Huntington Park in addition to promoting the development of new housing. This section also indicates how Huntington Park will meet its RHNA obligations housing objectives.

The primary source of information used in the compilation of demographic, housing, and socio-economic information for the City includes data collected by the U.S. Bureau of the Census. These statistics are collected every ten years as part of the national census. The most recent census was completed in 2010. The U.S. Bureau of the Census divided the United States into geographical units to assist in the enumeration and interpretation of the census data. The largest of these units is the Standard Metropolitan Statistical Area, or SMSA, which corresponds to the larger, more populous regions in the United States. The City of Huntington Park is located within the Los Angeles-Long Beach SMSA, which corresponds to Los Angeles County. A number of additional sources were referred to and relied upon in the preparation of the Housing Element including the following:

- The State Department of Finance (DOF) Demographic Research Unit was a source of population and housing information. The DOF publishes population and housing estimates for California cities and counties on an annual basis.
- The Southern California Association of Governments (SCAG) is mandated under State law to prepare population, housing, and employment projections that are to be used in the development of the region's Growth Management Plan. These projections are used in the determination of the City's Regional Housing Needs Assessment (RHNA).



- Land use and housing condition surveys were conducted during the preparation of this Housing Element.
- Finally, the current Five-Year Housing Assistance Plan was also reviewed and pertinent statistical data used.

## RELATIONSHIP TO GENERAL PLAN

State law requires that local general plans be internally consistent. In other words, policies and programs contained in this Housing Element must be reflected in the other Huntington Park General Plan Elements. The Land Use Element is particularly important in the implementation of housing policy as the Land Use and Sustainable Development Element designates land for residential development and establishes permitted densities and intensities of development.

The policies contained in other elements of the Huntington Park General Plan will have a direct bearing on the community's quality of life, the amount and variety of open space, the protection of natural and cultural resources, the maintenance of acceptable noise levels in residential areas, and the development of programs to ensure the safety of residents in the event of a disaster. This Housing Element's conformity to the other elements in the Huntington Park General Plan has been assured through the following activities:

- The City reviewed the policies and implementing programs that were included in the other General Plan Elements to ensure that they do not conflict with the policies that are contained in this Housing Element.
- This Housing Element also recognizes the overall development capacity levels identified in the Land Use Element. The Land Use Element is also referred to in the identification of the appropriate locations for new housing development.
- This Housing Element continues to promote the implementation of the Downtown Specific Plan that calls for both mixed use development and senior housing.



- This Housing Element continues with the Single Room Occupancy Overlay Zone as a means to provide for alternative types of residential living opportunities to help meet the needs of the community. All Single Room Occupancy (SRO) facilities allowed under this overlay zoning district shall be developed/operated in compliance with the provisions/standards contained in Chapter 3, Article 1 (Single Room Occupancy Facilities of the Zoning Ordinance. Single Room Occupancy (SRO) facilities are also allowed at up to 400 units per acre.
- This Housing Element continues with the Senior Citizen Housing Overlay Zone as a means to provide for senior citizen housing at up to 225 dwelling units per acre, generally located in high-rise developments with shared open space, meeting facilities, and reduced parking requirements.
- This Housing Element continues with the Affordable Housing Overlay Zone. The purpose of this zoning district is to facilitate the development of affordable family housing at densities up to seventy (70) dwelling units per acre.

In addition to the above, this Housing Element will be reviewed by the City on an annual basis with the General Plan to ensure the continued conformity between this Housing Element and the General Plan.



## OVERVIEW OF THE CITY OF HUNTINGTON PARK

Huntington Park has been completely urbanized since the Second World War and new development that has taken place in the City involved the redevelopment of existing developed parcels. In 1970, the City's population was 33,482. According to the most recent Census figures, the City's population is 61,348. This represents an increase of 27,866 persons or 83% in the past five decades. This near doubling in population has been absorbed within the City even though there were no large areas of vacant land that were developed or no annexations of unincorporated land. This growth occurred without the benefit of expanded or new roadways, new waterlines or sewer facilities, or new open space areas or parks. The underling city service and infrastructure framework essentially is unchanged from the time when the City's population was less than half of the current levels.

At the present time, the City's population density is among the highest in the State. With a total land area of 3.0 square miles and a population of 61,348 persons, the City's population density is 20,450 persons per square mile. Only two other neighboring cities in California have higher densities. The population density for the City of Huntington Park is ranked 15th in the United States. As the post World War II era progressed, the City also began to experience a shift in its demographic character. In addition, the decline of the manufacturing sector in the area also contributed to the economic transition that affected the region. The City developed as a suburban community, providing a centralized location for workers employed in Los Angeles and the surrounding industrial cities of Commerce, Vernon, and South Gate. The City's land use and development patterns were well established by the 1930's. A thriving downtown centered along Pacific Avenue was testament to the area's prosperity. A map of the City is provided in **Exhibit 6-1**.

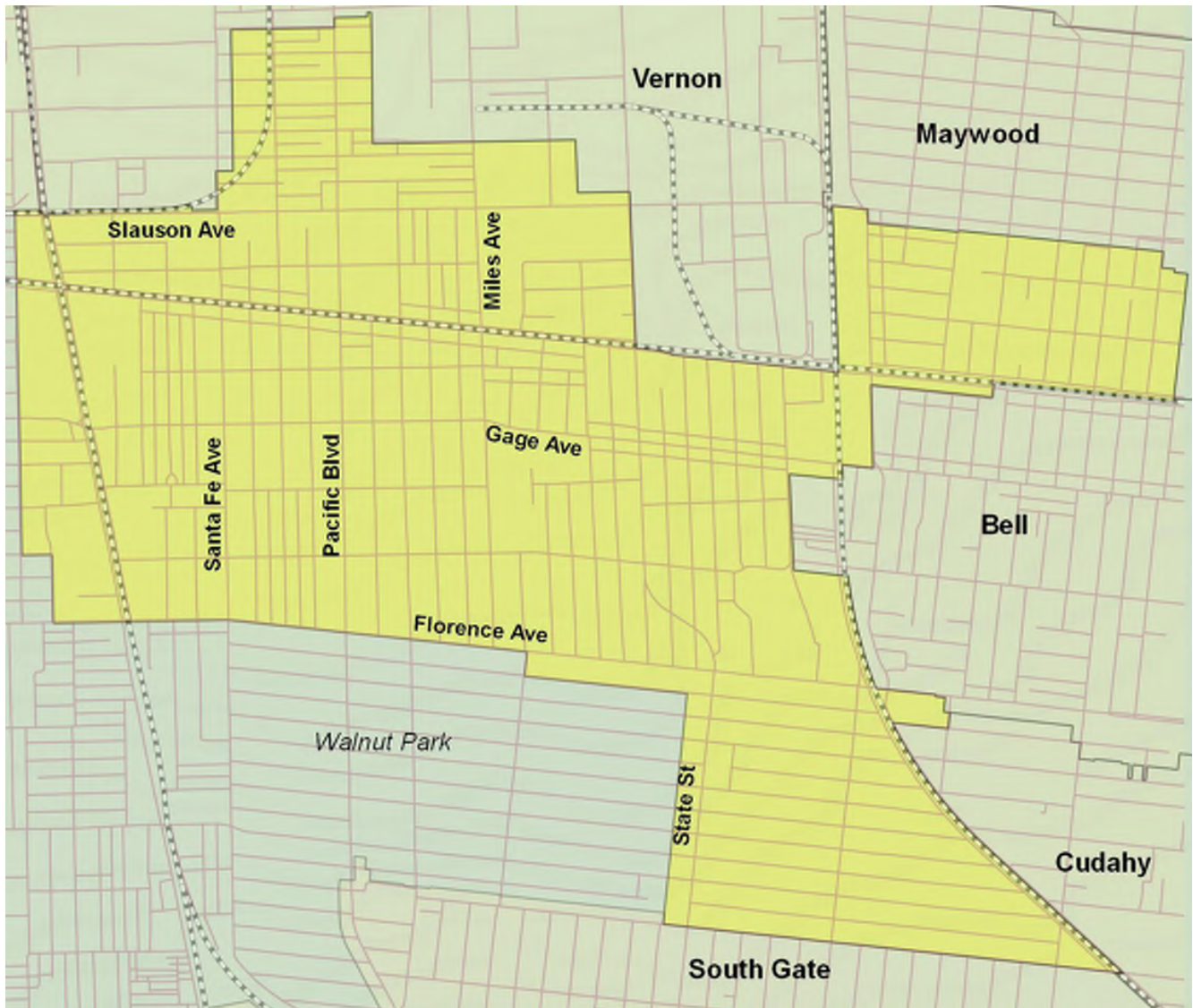
As the post World War II era progressed, the City began to experience a shift in its demographics character. In addition, the decline of the manufacturing sector in the area also contributed to the economic transition that affected the region. According to the most recent State of California Department of Finance estimates for January 2015, the City's population was 59,312 persons.<sup>1</sup> Key development and land use patterns are summarized in the following paragraphs.<sup>2</sup>

<sup>1</sup> State of California Dept. of Finance. Table E-5 City/County Population and Housing Estimates, Revised January 1, 2015.

<sup>2</sup> Blodgett Baylosis Environmental Planning. *Field Survey* (the field surveys were completed during vMay and June of 2015).



## Exhibit 6-1: A Map of the City of Huntington Park



- The City of Huntington Park contains a variety of uses; however, the most prominent land use in the City is residential. Extensive residential development of varying densities is observed east of Seville Avenue, extending east to the City's easternmost boundary, north to the City's northernmost boundary, and south to the City's southernmost boundary. Residential land uses are also located west of Pacific Avenue and extend as far west as Regent Street.
- Commercial development is found along the major roadways that traverse the City including Slauson Avenue, Pacific Boulevard, Gage Avenue, Santa Fe Avenue, and Florence Avenue. In addition, small pockets of commercial development occupy the frontages along many of the residential streets. The heaviest concentration of commercial uses is located in the City's downtown area along the Pacific Boulevard corridor which functions as the City's central business district.
- The City's industrial areas are located within the northern and western portion of the City. Industrial land uses extend from the City's northern border with Vernon along Slauson Avenue and 52<sup>nd</sup> Street, and westerly to the City's border with unincorporated Los Angeles County along Wilmington Avenue. The City's main industrial district is generally bounded by Santa Fe Avenue, Pacific Boulevard, and the City of Vernon to the east and Randolph Street to the south.
- Alameda Street, a major north-south arterial route, passes through the western portion of the City. The Alameda Corridor, a 20-mile long rail cargo expressway, extends through the center of Alameda Street. The portion of the Alameda Corridor that traverses the City is located within the 33-foot deep Mid-Corridor Trench.



## PUBLIC PARTICIPATION AND COMMUNITY OUTREACH

Community outreach and engagement, the process where the public participates and provides input in decision making, is pivotal in the success and sustainability of public projects. A successfully community outreach effort is integral to building consensus amongst elected officials, staff, government and the public. Community engagement is required by state law whenever a general plan is amended; the governing jurisdiction makes diligent effort to include all economic groups in the process. It is with this understanding that Tierra West Advisors ("Tierra West") has taken a 'boots on the ground' approach in executing community outreach efforts for the City of Huntington Park's Focused General Plan Update for Circulation, Land Use, and Housing Elements.

There are many crucial reasons to involve the public in the general plan process or in any other planning process. Some include:

- Providing valuable information leading to more informed policy development by decision-makers.
- Insuring the plan's successful implementation by building a base of long-term support with the public.
- Reducing the likelihood of conflict and drawn-out battles by addressing public



concerns during the general plan process rather than on a case-by-case basis in the future.

Public participation can have extremely positive impacts on the entire community, including:

- Educating the public about community issues.
- Increasing the public's ability and desire to participate in the community.
- Enhancing trust in government by strengthening the relationship between elected officials, government staff, and the public.
- Working towards community consensus and creating a vision for the future.
- Laying the groundwork for community revitalization and increased investment in the community.
- Obtaining public input regarding plan policies and community issues and objectives.
- Providing the public with opportunities to evaluate alternative plans and to participate in developing and choosing a plan that works for their community.
- Informing decision-makers about public opinion.

A general plan process is a valuable opportunity to focus on current issues in the community. The following are some important points that Tierra West carefully considered in strategizing a public participation process for *PlanHP* (the Focused General Plan Update project name):

- It is critical to understand the issues that are important to different segments of the community, including residents, business owners, and elected decision-makers. We want to ensure that all stakeholder groups feel that they have an opportunity to give input early in the process.
- The process should be simple and transparent; participants should be updated frequently as the process moves forward.
- The process should be as engaging, interactive, and fun as possible.



All affected stakeholders were represented in the public participation process. Stakeholder groups involved in the Huntington Park General Plan process have included:

- Community and neighborhood groups;
- Utility and public service providers;
- Educational institutions;
- Industry and business;
- Civic and community service organizations;
- Non-governmental organizations;
- Religious communities; and,
- Other public agencies.

The City sought to engage the complete range of community interests, such as environmentalists, developers, the elderly, youth, lower-income residents, special needs populations, and business owners. We believe that inclusive representation is critical in the outreach process. The process must be open and accessible to the entire community. *PlanHP* has collaborated with a variety of stakeholder groups so that their members feel comfortable participating in the process. Partnerships are valuable ways to build community awareness and enthusiasm for a general plan process. Civic groups can encourage their members to participate, hold informational meetings, and distribute information.





Early in the General Plan Update process, Tierra West held a number of meetings with Communities For a Better Environment (CBE), a respected community organization located in Huntington Park. Founded in 1978, Communities for a Better Environment is one of the preeminent environmental justice organizations in the nation. The mission of CBE is to build the people's power in California's ethnically diverse and low-income communities to achieve environmental health and justice by preventing and reducing pollution and building green, healthy and sustainable communities and environments. CBE's community organizing engages and educates low-income communities of color to build the power to influence environmental decisions that affect their lives. Through door-knocking, community meetings, school groups, political education, and other approaches, CBE's programs empowers communities to fight local pollution sources and work for greener, healthier communities through support of initiatives like Green Zones and locally-controlled alternative energy sources. PlanHP made a series of presentations to both of the prominent youth and adult advocate groups organized by CBE:

- **Youth For Environmental Justice (Youth EJ).** One of the unique components of CBE is their youth program, Youth for Environmental Justice. Since 1997, Youth for Environmental Justice (Youth EJ) has been organizing youth in Southeast Los Angeles around the issues of environmental and social justice. Youth EJ is committed to empower youth to take action to get educated and involved in their communities for their future. It does this through consciousness raising, organizing, and leadership development. Youth for Environmental Justice has Youth Action Clubs that meet at lunch in Huntington Park High School, South Gate High School, South East High School, International High School and Banning High School.

- **United Residents of South East LA (URSELA).** URSELA is the adult community advocacy group of CBE. URSELA is comprised of concerned residents of Huntington Park, South Gate, Bell, Maywood, and unincorporated Los Angeles County. URSELA works on different environmental issues in the surrounding communities, ranging from environmental propositions during the electoral process and fighting polluters to environmental health policy on a regional and statewide level.

*PlanHP* used several methods to help identify community issues and concerns and to identify residents' opinions about the strengths and weaknesses of their community, including an insightful community survey. A survey can help identify issues to be addressed by the general plan and areas where residents would like more information. Surveys can be designed to provide statistically accurate data or more qualitative responses. The *PlanHP* team worked to distribute information on the survey in a variety of ways, including:

- Direct Mailing;
- Including them in community newsletters;
- Printing them in local newsletters;
- Leaving them in city hall or county offices, coffee shops, and other community gathering places;
- Posting them on the City website;
- Enabling residents to access the survey online; and,
- Hosting community events where attendees could fill out the survey.

The PlanHP community engagement program was designed to include several stakeholder groups, such as residents, business owners, community organizations, churches, schools, and others. Our team's Outreach/Engagement Objectives have included:

- Educating the public about the City and the General Plan Update;
- Obtain public input;
- Develop an overall vision;
- Generate consensus while alleviating concerns;
- Engaging key stakeholders to foster long-term involvement; and,
- Obtain input from stakeholders.





## PLANHP SURVEY

APRIL 15, 2016



Fill out the PlanHP Survey and tell us what you think about your city!

Your input will be used to identify key community issues and will directly inform the goals and objectives for the General Plan. If you are interested in filling out our online focus group survey, please follow the links below.

[Survey in English](#)

[Survey in Spanish](#)

If you have any issues with the online survey, you can also download the PDF version by [clicking here](#).

Community Visioning is an inclusive planning process wherein a community creates a shared vision for its future and begins to make it a reality. A General Plan provides a guide for community plans, policies, and future actions in the community. The General Plan Update process for the City of Huntington Park included a holistic series of community engagement workshops that focused on the following key characteristics:

- **Understanding the whole community** – The General Plan process has promoted an understanding of the whole community and the full range of issues shaping its future. It also attempted to engage the participation of the entire community and its key stakeholders groups.
- **Reflecting core community values** – The General Plan Update process has identified the community's core values – those deeply held community beliefs and ideals shared by its members. Such values inform the idealistic nature of the community's vision and goals.
- **Addressing emerging trends and issues** – The process explored the emerging trends driving the community's future and the strategic issues they portend. Addressing such trends promoted greater foresight, adding rigor and realism to the community's vision.
- **Envisioning a preferred future** – The engagement process produced a statement articulating the community's preferred future. The statement represents the community's desired "destination" – a shared image of where it would like to be in the upcoming generation.
- **Promoting local action** – the General Plan Update will also provide detailed implementation strategies and policies. This document serves as the community's roadmap, moving it in the direction of its vision in the near-term future.

In an effort to achieve these key outreach goals, Plan HP hosted a series of public workshops, conducted focus groups with community workshops, worked with the students of schools within the community, presented before Neighborhood Councils, Council Office, and held interdepartmental meetings with City Staff to analyze and discuss our results. Tierra West held roundtable meetings on 10/8 and 10/26 to review planning, background information, and initial strategy for the Community Outreach/Engagement elements of the project. The consulting team attended the City's annual



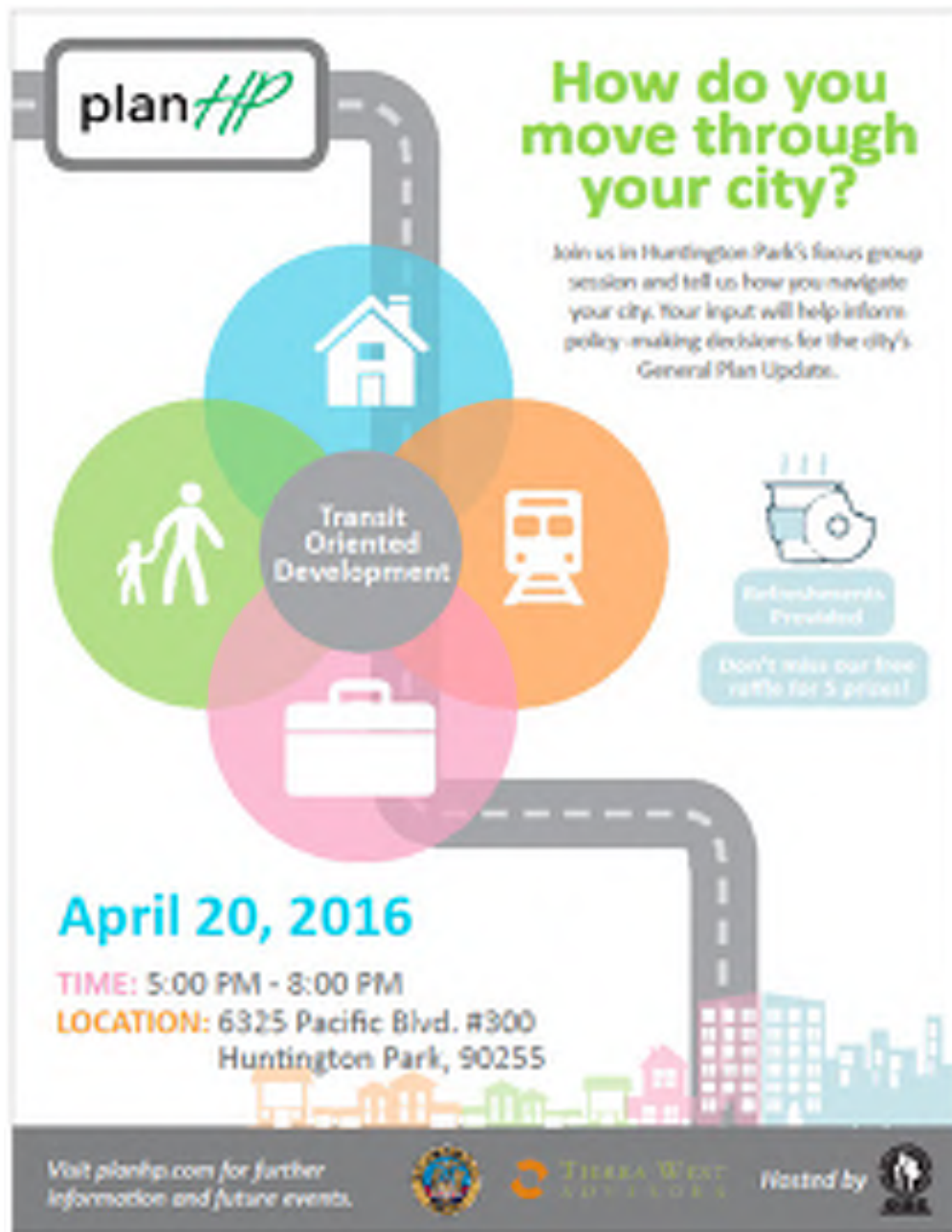
Halloween Festival, where team members provided educational project materials, greeted community members, and solicited feedback from attendees on some key community issues.

An ongoing emphasis was made to invoke separate strategies for engaging both the Huntington Park youth and senior groups. The consultant team attended the Youth Commission meeting at the Parks and Recreation Center on 11/2, and also met with Marquez High School staff in November to discuss parent/student involvement in the process. The team also continued planning efforts for a stand-alone Huntington Park Community Engagement event, which will identify key community issues and present initial alternatives to solving those issues within the General Plan Update. We have been working iteratively with Communities for a Better Environment (CBE), a local environmental health and justice organization with a long history of community outreach involvement in Huntington Park. They will continue to be involved in our engagement and their local reach will be invaluable when diagnosing key community issues.

The consultant team and the City completed a crucial community outreach workshop in Huntington Park for *PlanHP*. The team partnered with Communities for a Better Environment (CBE), a Huntington Park-based organization focusing on environmental justice and community advocacy. The group has a strong local presence in Huntington Park, with a devoted young group (YouthEJ) and adult group (United Residents of Southeast Los Angeles). CBE produced an important community document in 2012, “Brown To Green Vision for Huntington Park,” which emphasized revitalization of several underutilized industrial areas in the City. Their longevity and respect within the community made them an important partner for *PlanHP*, and their office space on Pacific Avenue in Huntington Park was perfect for our April 20, 2016 public outreach meeting.

After input from Huntington Park City Council Members Graciela Ortiz and Karina Macias, *PlanHP* launched a Youth Plan Huntington Park (YPHP) program in further educate and involve the local youth in the General Plan Update process. Its goal was to assemble a group of students who are interested in learning more about community outreach, planning, and administering surveys. After learning more about updating the General Plan and *PlanHP*, these students became ambassadors for the effort, helping to collect input for the process from their family, classmates, and peers. They met weekly over the course of five weekends, and made a final presentation to City





Council on May 28, 2016, when they are provided certificates from the Mayor for their advocacy efforts. The consulting team member (Tierra West) led a series of interviews and meetings with local stakeholders. The consulting team continued meeting with individuals and groups including City Department Directors and Staff, members of the

City Council, members of City commissions, business community leaders, Chamber of Commerce representatives, and residents. Meetings and interviews were conducted with important stakeholders such as:

- Huntington Park Mayor Karina Macias
- Huntington Park Vice Mayor Graciela Ortiz
- Other members of the City Council
- Huntington Park City Manager Edgar Cisneros
- Huntington Park Library staff
- Huntington Park Director of Parks and Recreation
- Marquez High School staff
- Communities for a Better Environment (CBE) staff
- CBE Youth for Environmental Justice (YouthEJ)
- CBE United Residents of South East LA (URSELA)

Websites allow for digital information and idea-sharing between the City and participants and among participants themselves. It is also a good way to keep people up-to-date on the project process. Many jurisdictions use their city or county website to post information about the general plan process, such as progress, meeting dates and times, and supporting materials. For *PlanHP*, Tierra West and City Staff decided to create a separate website specifically for the general plan process. Online technology offers the opportunity for community members to share ideas and ask questions and can allow for a greater number of people to participate without having to attend meetings or workshops. For example, any community who may not have been able to attend a *PlanHP* public workshop were able to easily access the same survey online. E-mail newsletters have also been used to send meeting reminders and updates to the public, as well as to receive input on planning issues. The consulting team, in close collaboration with City staff, launched PlanHP.com in Summer 2015. The site provides 24-hour access to project information for residents and stakeholders in the City of Huntington Park. The design is clean, modern, minimalist, bilingual (English and Spanish), and easy to navigate. Its main purpose is to 1) educate public about the project, 2) advocate involvement in upcoming meetings, and 3) elicit feedback (through email newsletter signups, polls, and surveys). The web programmers tested the requisite plug-ins and widgets needed for the Online Poll and Online Survey functionality of the site. These elements are working properly and are now ready to compile responses from users.





## Your one-stop resource for the City of Huntington Park 2016 Focused General Plan Update

Here you will find the most recent information about the PlanHP Focused General Plan Update project, studies, progress, and ways that you can participate. Please browse the site and join us in planning Huntington Park's future! Check back often for updates on the planning process, access to public meeting materials and presentations, and to review draft documents.



[CLICK HERE FOR OFFICIAL CITY OF  
HUNTINGTON PARK WEBSITE](#)

### Latest News & Updates



#### Youth Plan Huntington Park Community Initiative Completed JUNE 27, 2016

We're proud to announce the conclusion of our Youth Plan Huntington Park (YHPHP), a 5-week community initiative aimed to educate and involve local youth in the General Plan Update process. Youth Plan Huntington Park was launched as a community initiative that educates youth to become actively engaged in the Huntington Park General Plan Update. High...

Government Code, Section 65589.7, requires the City to provide water and sewer purveyors with the opportunity to participate in the Housing Element's development. This cooperation is important so that housing production can be coordinated with infrastructure plans. The City of Huntington Park is served by four water companies which obtain their supply of water from two sources: groundwater from local wells and water supplied by the Metropolitan Water District. The four water companies are listed below.

- **Maywood Mutual Water Company.** The Maywood Mutual Water Company serves the northeastern portion of the City. The service boundaries extend east to west from Maywood Avenue to the City's border with Maywood, and north to south from Slauson Avenue to Randolph Avenue. Approximately 70% of the Maywood Mutual Water Company's costumers reside in Huntington Park.
- **Walnut Park Mutual Water Company.** The Walnut Park Mutual Water Company serves the odd-numbered side of Walnut Street (addresses 2901-3501 Walnut Street).
- **Golden State Water Company.** The City of Huntington Park is located within the Central Basin West service area of the Golden State Water Company. Golden State Water Company serves the western portion of the City. The service boundaries extend from Slauson Avenue to the north to Florence Avenue to the south, and from the City's western border with Florence-Graham to the west to Alameda Street to the east.
- **Severn Trent Services.** Severn Trent is the City's main provider of water and operates multiple wells in the City, including Well Numbers 12, 14, and 17.

The Water Master Plan acknowledges for these purveyors indicate that water service for low income households within the service area must be prioritized. Historical data indicates the Main Basin and Central Basin have been well managed for the full period of the adjudications, resulting in a stable and reliable water supply. There are no contemplated basin management changes, other than increasing direct use of recycled water and the planned use of recycled water for groundwater replenishment in the Main Basin to reduce the need to import water from other regions. Therefore, the groundwater supplies are deemed reliable. Following the adoption of this Housing Element, the City will continue to work with water and sewer providers to coordinate housing and infrastructure plans.



## 6.2 BACKGROUND FOR PLANNING



This section provides an overview of the demographic, housing, and socioeconomic characteristics of the City of Huntington Park. The information contained in this section indicates those trends that have occurred in the City in the years following incorporation. This section of the Element considers the following:

- **Population Characteristics** includes an analysis of population growth trends, age characteristics, and ethnicity of the City's residents;
- **Housing Unit Characteristics** focuses on trends in residential development, housing unit types, and housing tenure;
- **Household Characteristics** provides an overview of the key socioeconomic characteristics germane to housing need;
- **Housing Constraints** indicates those factors that may affect the development of new housing in the City.

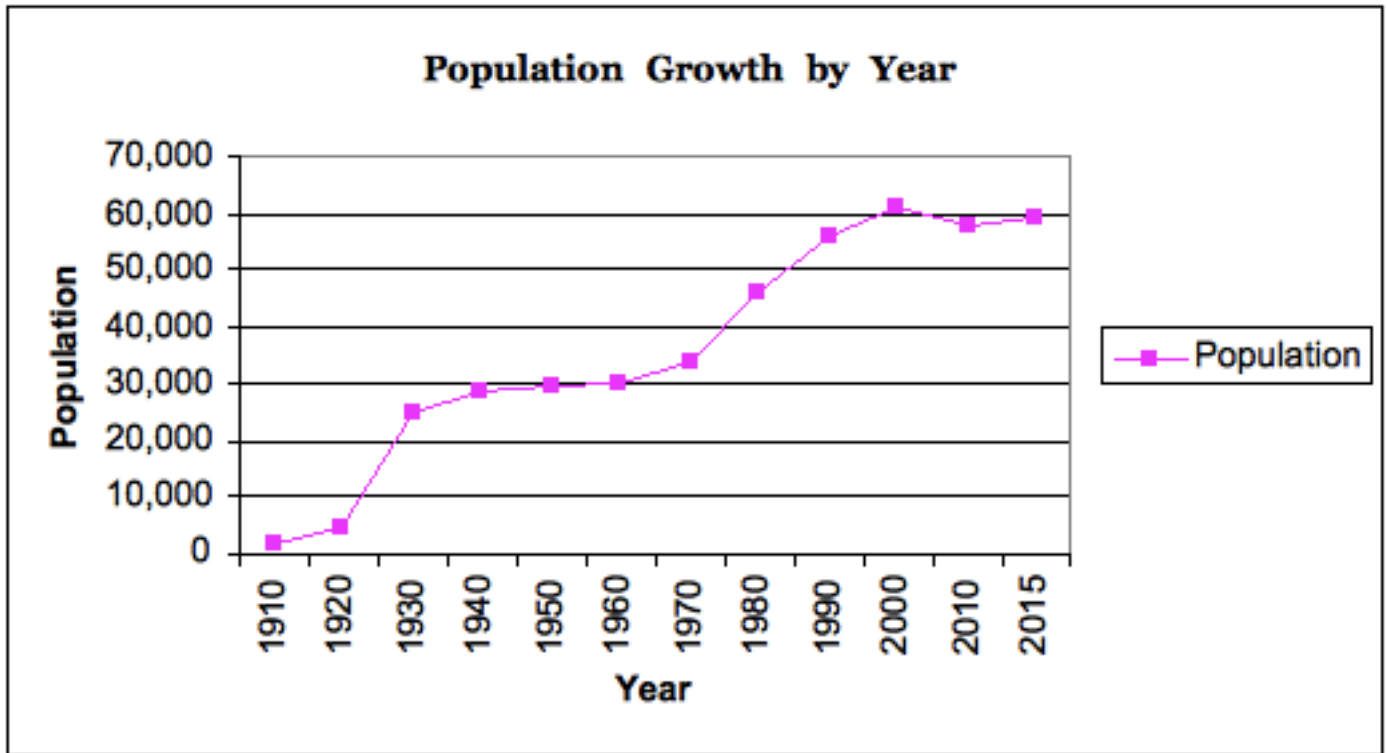


## POPULATION CHARACTERISTICS

According to the 2018 DOF estimates, the City's population was estimated to be 59,473 persons. The City experienced its most rapid growth during the 1920's when the City added an additional 20,078 residents. The most recent 2010 Census indicated the City's population was 58,114 persons at the time the Census was taken. The most recent (2018) California State Department of Finance (DOF) estimates place the City's population at 59,473 persons. In recent years since the 2000 Census, the City's population growth has experienced a slight decline. The City's population trend is shown in **Table 6-1** and illustrated in **Exhibit 6-2**.



## Exhibit 6-2: City of Huntington Park Population Trends



**Table 6-1: Population Trends 1910-2018**

Year	Population	Change - #	Change - %
1910 <sup>1</sup>	1,299	--	
1920 <sup>1</sup>	4,513	3,214	247.4%
1930 <sup>1</sup>	24,591	20,078	81.6%
1940 <sup>1</sup>	28,648	4,057	14.2%
1950 <sup>1</sup>	29,450	802	2.7%
1960 <sup>1</sup>	29,920	470	1.6%
1970 <sup>1</sup>	33,744	3,824	11.3%
1980 <sup>1</sup>	45,932	12,188	26.5%
1990 <sup>1</sup>	56,065	10,133	18.1%
2000 <sup>1</sup>	61,348	5,283	8.6%
2010 <sup>1</sup>	58,114	-3,234	-5.6%
2018 <sup>2</sup>	59,473	1,359	2.3%
Source: 1. U.S. Bureau of the Census 1910-2010; 2. California DOF 2018.			

The overall increase in the City's population since the 1970's was due to both an increase in the average household size and new residential construction. **Table 6-2** compares the trends in the average household size for Los Angeles County with those of the City for the years 1990 through 2013. As indicated in Table 6-2, the average household size for the City is significantly higher compared to Los Angeles County as a whole. In Huntington Park, the average household size between 1990 and 2013 increased from 4.00 to 4.04 persons per unit.

**Table 6-2:** Population Trends 1910-2015

Year	County	Huntington Park
1990	2.40	4.00
2000	2.98	4.12
2010 <sup>1</sup>	2.91	3.96
2015 <sup>2</sup>	3.00	4.04
Change	0.60	0.04
Source: 1. U.S. Bureau of the Census 1980-2010; 2. California DOF 2015.		

## POPULATION AGE CHARACTERISTICS

Census data was reformatted in **Table 6-3** to depict the age statistics arranged according to specific age categories (preschool-aged, school-aged, young adults, etc). Table 6-3 charts the age characteristics of the City's population for the years of 2000 and 2013. As is evident from the examination of Table 6-3, the age cohorts that experienced the greatest rates of decline consisted of the school-aged children (5 to 19 years of age) and the working adults (25 to 54 years of age). The age characteristics for the City's population are shown in **Exhibit 6-3**.

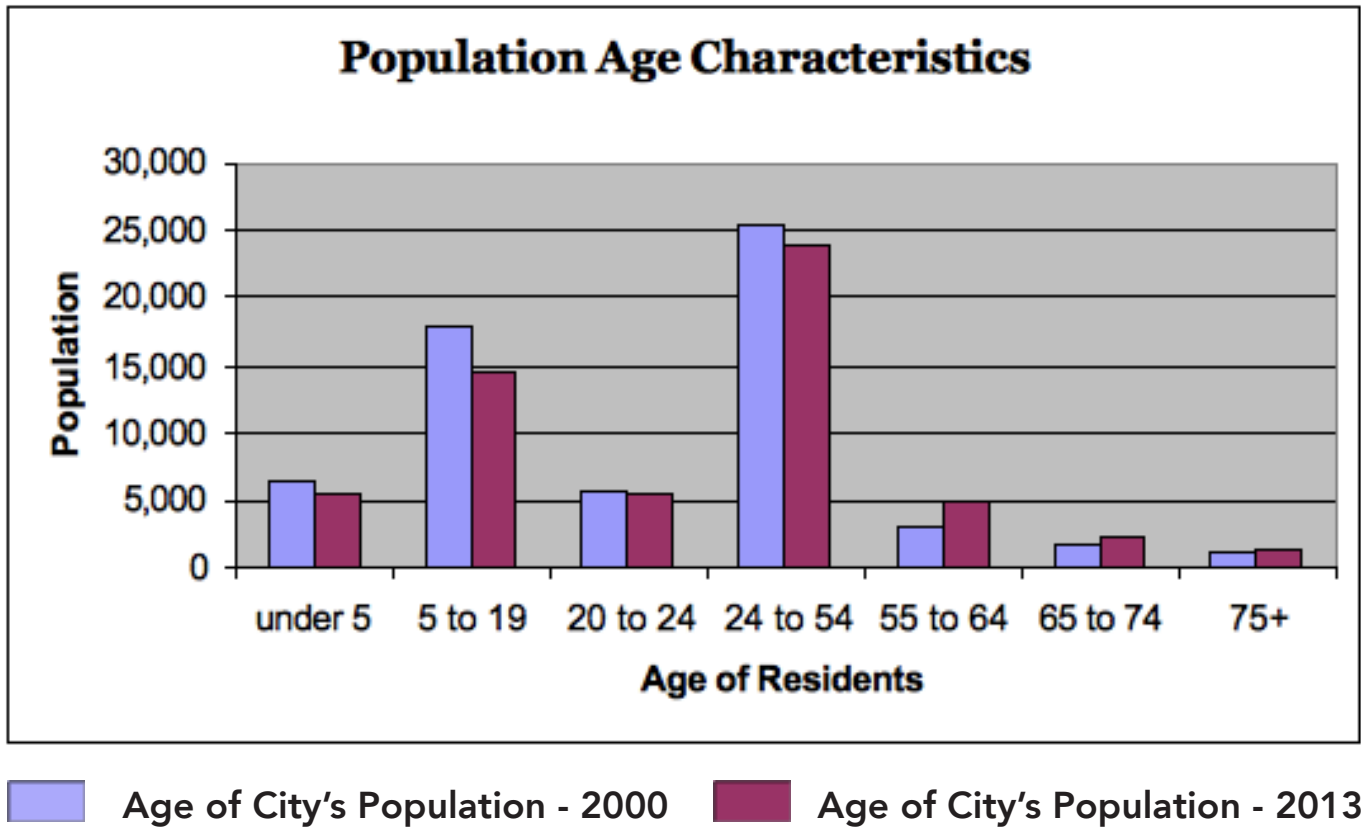
In 2000, the median age of the City's population was 25.6 years. According to the most recent 2013 American Community Survey data, the City's median age was 29.2 years of age. Corresponding statistics for Los Angeles County were 32 years of age and 35.1 years of age for 2000 and 2013, respectively.



**Table 6-3: Age Characteristics 2000-2013**

<b>Age</b>	<b>2000</b>	<b>2013</b>	<b>Change - #</b>	<b>Change - %</b>
under 5	6,406	5,588	-818	-12%
5-19	17,836	14,558	-3,278	-18%
20-24	5,673	5,549	-124	-2%
24-54	25,353	23,755	-1,598	-6%
55-64	2,944	4,888	1,944	66%
65-74	1,880	2,405	525	27%
75+	1,256	1,444	188	14%
Total	61,348	58,487	-2,861	-4%
Source: U.S. Bureau of the Census, 2000 American Community Survey 2013.				

## Exhibit 6-3: City of Huntington Park Age Characteristics



## RACE AND ETHNICITY

Approximately 72.5% of the City's population was classified as white while 0.6% was classified as African-American, 0.7% as Asian, 0.6% as American Native or Alaskan, and 1.3% consisting of two or more races. Hispanics are considered an ethnic group rather than a racial group. Hispanics may include persons from a variety of races including Caucasians, African-Americans, and even Asians. Hispanics accounted for 97.8% of the City's total population.

**Table 6-4:** Race and Ethnicity: 2013

Race/Ethnicity	Persons - #	Persons - %
White	42,377	72.5
African-American	374	0.6
Asian	409	0.7
American Indian	356	0.6
Two or more Races	744	1.3
Total	44,260	75.7
Hispanic	57,167	97.8
Source: U. S. Bureau of the Census, American Community Survey, 2013.		

## HOUSING UNIT CHARACTERISTICS

According to the 2010 Census, there were 15,151 housing units in the City. The most recent DOF estimates identified 15,178 housing units in the City as of January 1, 2015.

**Table 6-5** summarizes housing types derived from the 2010 U.S. Census statistics and the 2015 State Department of Finance Housing estimates for the City of Huntington Park. The housing unit types are also illustrated in **Exhibit 6-4**.



**Table 6-5: Housing Characteristics: 2000 - 2015**

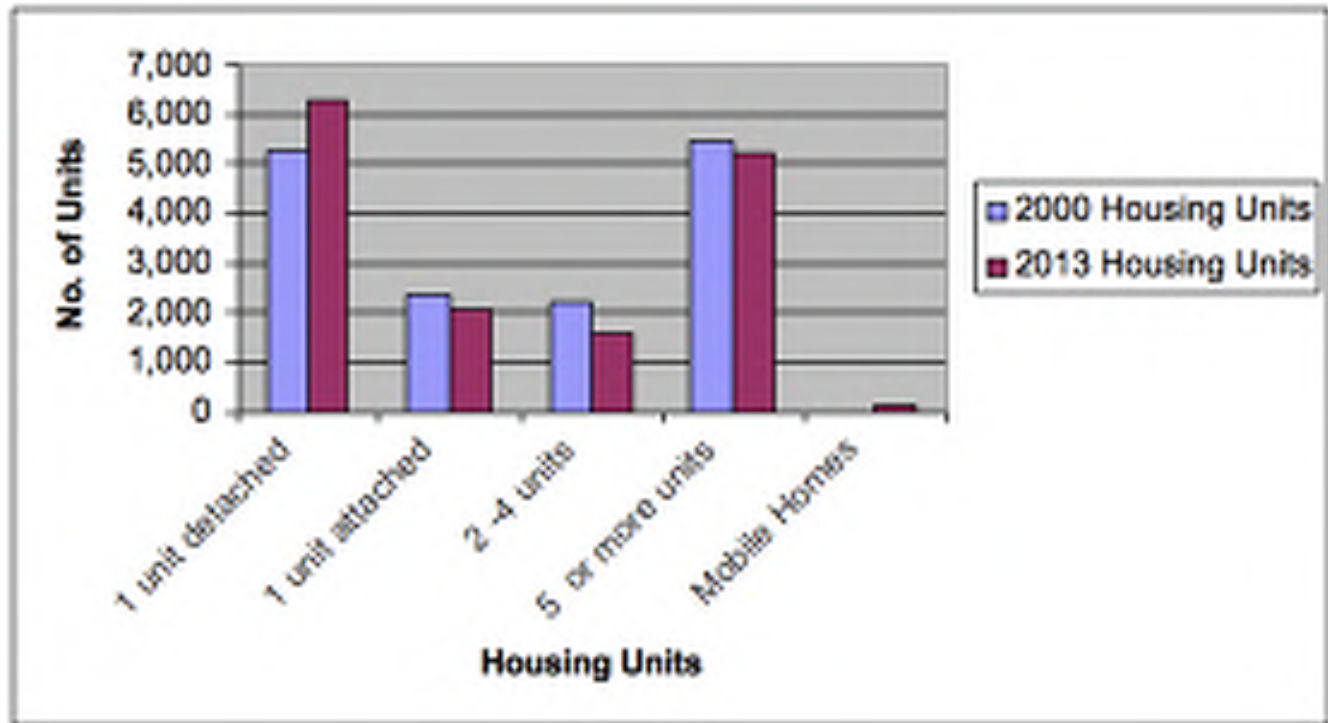
Unit Type	2000 <sup>1</sup>		2015 <sup>2</sup>		Change-Δ	
	#	%	#	%	#	%
1 unit detached	5,268	34.3%	6,267	41%	999	19%
1 unit attached	2,370	15.5%	2,033	13%	337	14%
2 -4 units	2,209	14.4%	1,585	10%	624	28%
5 or more units	5,477	35.7%	5,208	34%	269	5%
Mobile Homes	7	—	85	0.1%	78	1114%
Total	15,338	100%	15,178	98%	210	1%
Sources: 1. 2010 U. S. Census. 2. State Department of Finance 2015.						

## HOUSING TENURE

**Table 6-6** indicates housing tenure statistics for 2000 and 2013. The percentage of owner-occupied units in Huntington Park has declined slightly since 2000 when approximately 27.4% of the housing units were classified as owner-occupied. Approximately 26.8% of the units in Huntington Park are owner-occupied according to the 2013 U.S. Census estimates.



## Exhibit 6-4: City of Huntington Park Housing Unit Characteristics: 2000-2013



2000 Housing Units

2013 Housing Units

**Table 6-6: Housing Tenure in Huntington Park: 2000-2013**

Year	Owner Occupied		Renter Occupied	
	Units - #	Units - %	Units - #	Units - %
2000	4,065	27.4	10,795	72.6
2013	3,867	26.8	10,588	73.2
Change-Δ	-198	-0.60	-207	-0.60
Sources: 2000 and 2013 U. S. Census.				

## HOUSING AGE, CONDITION, AND OVERCROWDING

The most widely referred to variable is related to the age of the housing unit. The use of this information is based on the premise that the older the units, the more likely they are to require some form of repair or maintenance. This is not always the case since many older units have undergone extensive renovation and/or remodeling. As a result, the housing unit age data should not be exclusively used to determine the overall condition of housing in the City. **Table 6-7** depicts the 2010 U.S. Census statistics indicating the age of the housing units within the City.

**Table 6-7:** Age of Housing Stock in 2013

Year Unit Constructed	Units - #	Units - %
2010 or later	4	0
2000-2009	210	1.4
1990-1999	416	2.8
1980-1989	1,204	8
1970-1979	1,483	9.9
1960-1969	1,746	11.6
1950-1959	2,449	16.3
1940-1949	3,014	20.1
1939 or earlier	4,485	29.9
Total	15,011	100%
Source: U.S. Bureau of the Census, ACS 2013.		



Housing units that were constructed prior to 1960 are generally considered to be potential candidates for rehabilitation since the structures are approaching fifty years in age. As indicated in Table 6-7, a total of 9,948 units were constructed prior to 1960. This represents 66% of the total housing units in the City.

There are a number of other Census indicators that are useful in identifying potential dilapidated units. These indicators include units without heating, units lacking conventional plumbing, or units lacking complete kitchen facilities. The latter variable may also be an indicator of bootleg units constructed illegally or legal second units. According to the 2013 ACS Survey, 91 units (0.6%) lacked plumbing and 150 units (1%) lacked kitchen facilities. Overcrowding may also be a contributor to the deterioration of housing units.

A household is considered to be overcrowded if the number of persons residing in the unit exceed 1.01 persons per room. A household is severely overcrowded if the number of persons residing in the unit exceed 1.51 persons per room. **Table 6-8** provides a breakdown in the number of overcrowded units that were identified in the most recent 2013 ACS, broken down by housing tenure. Of the 14,455 occupied housing units identified in the 2013 Census estimate, 2,804 units were identified as being overcrowded (19.4% of the City's total number of occupied units) and 2,959 units (20.5% of the total occupied units in the City) were identified as being severely overcrowded. Household overcrowding, rates has decreased from 63% of all renters in 2000 to 48% a decade later (as documented by the 2007-2011 ACS). Severe overcrowding (greater than 1.5 persons per room) impacts 27% of renters in the City. The greatest concentration of overcrowded units include several neighborhoods with concentrations of severe renter overcrowding (over 45%): north of Florence immediately east of Santa Fe; the neighborhood on either side of State bound by Gage and Saturn; both sides of Pacific bound by Randolph and Slauson; and the northernmost portion of the city directly to the east of Santa Fe.



**Table 6-8:** Large Family and Overcrowded Housing Units in Huntington Park - 2013

Category	Total Units
Overcrowded - #	2,804
Overcrowded - % <sup>1</sup> .	19.4
Severely Overcrowded #	2,959
Severely Overcrowded % <sup>1</sup> .	20.5
Source: U.S. Bureau of the Census, 2013 ACS.	

## HOUSEHOLD INCOME

The 2013 median household income in Huntington Park was \$36,397. The median household income for the State was \$61,094. According to the 2013 Census, 27% of the families living in the City had annual incomes that were below the poverty level. Of this total, 39.6% were under the age of 18 years. **Table 6-9** summarizes the annual household income statistics for the City based on the 2013 Census estimates.

## SPECIAL NEEDS GROUPS

Special housing needs groups are those households that contain the elderly, handicapped, large families, overcrowded households, female heads of households, and persons in need of emergency shelter. Pursuant to the Housing Element Legislation, a housing element must include an analysis of special housing needs. That is to say the housing needs of such groups as handicapped, elderly, large families, farm workers, and families with female heads of households need to be considered. In addition, an analysis of overcrowded households is also required though this analysis was included in a previous section.



**Table 6-9: Household Income in 2013**

Income Category	No. of Households	% of Total In the City
Less than \$10,000	862	6
\$10,000 to \$14,999	1,367	9.5
\$15,000 to \$24,999	2,726	18.9
\$25,000 to \$34,999	1,992	13.8
\$35,000 to \$49,999	2,694	18.6
\$50,000 to \$74,999	2,682	18.6
\$75,000 to \$99,999	1,168	8.1
\$100,000 to \$149,999	734	5.1
\$150,000 to \$199,999	150	1
\$200,000 or more	80	0.6
Source: U. S. Census 2013.		

## SPECIAL NEEDS GROUPS - LARGE FAMILIES

According to the HCD's definition, the term "large family" refers to a family containing five or more persons. According to the 2010 Census, a total of 1,776 large family (45.2% of the total renter occupied households) households lived in owner-occupied units. The same Census figures also indicated that 3,359 large family households (31.5% of the total renter occupied households) lived in rental units. This overcrowding is exacerbated by the large number of renter households in the City as well as the age of the City's housing stock.

## SPECIAL NEEDS GROUPS - FEMALE HEAD OF HOUSEHOLDS

In 2013, there were 3,804 female-headed households, representing 26.3% of the total number of households in Huntington Park. Of this total, 2,218 or 15.3% of the total female-headed households in the City included minors, 18 years of age or less. This number bears importance in relation to social service needs, such as child care, recreation programs, and health care, which are of special concern to these households. For purposes of comparison, approximately 15.2% of the total households in Los Angeles County were female-headed households.

## SPECIAL NEEDS GROUPS - PERSONS IN NEED OF EMERGENCY SHELTER

There are two categories of need that should be considered in discussing the homeless: 1) transient housing providing shelter and usually on a nightly basis; and, 2) short-term housing, usually including a more comprehensive array of social services to enable families to re-integrate themselves into a stable housing environment. The issue of homelessness emerged as a major issue in the 1990's during the severe economic recession that Southern California was undergoing at that time. Homelessness was further exacerbated by the closing of mental institutions and the recent housing dislocation associated with the great recession that began in 2008. While the Southern California economy is improving, housing costs are once again rising in response to the growing demand. As a result, homelessness within the larger Southern California region continues to be a problem. Various circumstances that may lead to homelessness include the following:

- Single adult transients passing through the City on the way to some other destination;
- Seasonal and/or migrant homeless individuals seeking seasonal employment in the City;
- The chronically homeless, single adults, including non-institutionalized, mentally disabled individuals, alcohol and drug abusers, elderly individuals with insufficient incomes, and others who voluntarily, or are forced, due to financial circumstances, to live on the streets.



- Minors who have run away from home;
- Low-income families that are temporarily homeless due to financial circumstances or are in the process of searching for a home (single-parent families, mostly female-headed, are especially prevalent in this group); and,
- Women (with or without children) that are escaping domestic violence.

A citywide housing condition survey was conducted by the preparers of this Housing Element during August and September of 2016. This survey involved a windshield survey of every street in the City of Huntington Park. During this survey, the location and extent of homeless persons were also noted. The surveys identified between three and ten homeless individuals on each day the survey was conducted. The majority of these homeless individuals were observed in the Civic Center. Statistical methods were also used to forecast the balance of the County's homeless population. The survey considered the following:

- Unsheltered homeless people, including those found on streets, in vehicles, in makeshift shelters (such as tents), and encampments;
- Sheltered homeless people occupying emergency shelters, transitional housing, domestic violence shelters, and those using vouchers to stay in hotels or motels; and,
- A count of homeless people occupying short-stay institutions such as hospitals, residential rehabilitation facilities, and jails was completed.

The Los Angeles Homeless Services Authority (LAHSA) is a joint powers authority of the City and County of Los Angeles, created in 1993 to address the problems of homelessness in Los Angeles. The LAHSA is responsible for funding and coordination of homeless services and housing assistance to support the homeless population of men, women and children in the City and County of Los Angeles. LAHSA is the lead agency in the HUD-funded Los Angeles Continuum of Care (which includes 85 cities and the unincorporated areas of Los Angeles County, excluding the cities of Glendale, Long Beach and Pasadena), and coordinates and manages more than \$132 million annually in federal, state, county and city funds for programs providing shelter, housing and services to homeless persons. Since 2005, LAHSA has coordinated six biennial Greater Los Angeles Homeless Counts. Beginning 2016, the Point-In-Time Count occurs annually.



The City of Huntington Park was included in East Los Angeles County (SPA 7). The 2015 survey identified 3,571 homeless persons. Of this total, 907 homeless persons were “sheltered and 2,664 persons were “unsheltered.” The 2016 survey identified 3,469 homeless persons. Of this total, 987 homeless persons were “sheltered and 2,482 persons were “unsheltered.” Included in the Permanent Supportive Housing count is Huntington Park’s recently opened Mosaic Gardens which includes 34 beds in 23 units. The project was developed by LINC Housing with the assistance of Federal HOME dollars from the City of Huntington Park. Mosaic Gardens in Huntington park includes 15 units that are reserved for households where at least one member has an open and active case with the Los Angeles Department of Mental Health, meets Transition Aged Youth designation (including persons between 18-24 years of age), and meets homeless requirements. The Mosaic Gardens is located at 6337 Middleton Street.

## **SPECIAL NEEDS GROUPS - FARM WORKER HOUSING**

Because of the extensive amount of agricultural activity in the State, the Housing Element law requires the consideration of farm worker housing needs. Currently, there are no farm worker households residing in Huntington Park.

## **SPECIAL NEEDS GROUPS - ELDERLY AND HANDICAPPED**

The most recent 2010 Census indicated that 1,718 senior households in Huntington Park representing 19.4% of the total households in the City. Senior-headed households living in rental units accounted for 7.9% of the total rental households in the City. Senior-headed owner-occupied housing units accounted for 5.2% of the total occupied units in the City. According to the Census, there were 7,188 residents in the City that had a disability (this figure represents approximately 19.7% of the City’s total population). Of this total, 913 persons with a disability were 20 years of age or younger. Working aged persons (21 years to 64 years in age) with a disability totaled 5,167 persons. Finally, seniors (65 years or older) with a disability totaled 1,108 persons.

The Los Angeles County Department of Health Services (LACDHS) is the major provider of health care for more than two million residents in the County without health insurance. The LACDHS provides hospital and outpatient care, programs and clinics, emergency medical services and rehabilitative services. Through its university affiliates (UCLA and USC), the County hospitals conduct postgraduate medical education for



interns, residents, and fellows. The Department operates four acute care hospitals, a rehabilitation hospital, a multi-specialty ambulatory care center, six comprehensive health centers, and nine health centers. Additionally, the LACDHS operates two trauma centers, two pediatric trauma centers, four emergency rooms, and a state-of-the-art burn center.

The City of Huntington Park is located within the service area of the South Central Los Angeles Regional Center for Persons with Developmental Disabilities, Inc. (SCLARC), which is a private, non-profit, community based organization. The SCLARC contracts with the State Department of Developmental Services (DDS) to coordinate services for individuals with developmental disabilities and their families. According to the SCLARC, there are currently 310 consumers being served by the regional center. Key services offered by the SCLARC include the following:

- **Adult Day Program.** The Adult Development Center (ADC) includes various community programs for adults that are in the process of acquiring self-help skills. These programs focus on the development and maintenance of functional skills required for self-advocacy, community integration, employment, and self-care.
- **Sheltered Workshops.** Participants may also participate in a sheltered, five-day per week workshop and perform as if they are working at a regular job for which they receive monetary compensation.
- **Behavior Management Day Programs.** These programs serve adults with severe behavior disorder and/or dual diagnosis who, because of their behavior problems, are not appropriate for any other community-based day program.
- **Residential Placement.** Residential direct support professionals provide services to children and adults who are unable to reside in the family home. Temporary placements are utilized in unusual circumstances that may occur in emergencies or whenever appropriate placements are not available. There are also intermediate care facilities for the developmentally disabled and skilled nursing care on an extended basis. Most SCLARC consumers placed in residential facilities are eligible for SSI/SSA benefits, as well as Medi-Cal.



- **Supported Living.** Adults with developmental disabilities, regardless of the degree of the disability, have the right to live in homes of their choice as long as they are provided with services that will ensure and enhance their success with integration into mainstream society. Supported living services consist of services to adults with developmental disabilities that choose to live in homes they themselves own or lease in the community.
- **Independent Living Training.** Independent living services is a six-month service available to persons 18 years of age and older who are not enrolled in school and have demonstrated potential for living on their own with a minimal amount of supervision. Training is provided in all areas of home management (budgeting, housekeeping, cooking, etc.) and should not be confused with the activities of daily living (bathing, grooming, toileting, etc.).
- **Supported Employment.** Supported employment programs provide support to adults who are interested in competitive employment. Supported employment programs are funded by the Department of Rehabilitation.

The City of Huntington Park requires that all new residential developments comply with California building standards (Title 24 of the California Code of Regulations) and Federal requirements for accessibility. Other City efforts designed to promote reasonable accommodation include the following:

- **Procedures for Ensuring Reasonable Accommodations.** Minor building improvements, such as ramps, rails, and wheelchair lifts, may be handled through an administrative review process to evaluate such development requirements applicable to housing for persons with disabilities.
- **Efforts to Remove Regulatory Constraints for Persons with Disabilities.** The State has removed any City discretion for review of small group homes for persons with disabilities (six or fewer residents). The City of Huntington Park does not impose additional zoning, building code, or permitting procedures other than those allowed by State law. There are no constraints on housing for persons with disabilities caused or controlled by the City.
- **Retrofitting Requirements.** The City also allows residential retrofitting to increase the suitability of homes for persons with disabilities in compliance



with accessibility requirements. In addition, the City works with applicants who need special accommodations in their homes to ensure that application of building code requirements does not create a constraint.

- **Information Regarding Accommodation for Zoning, Permit Processing, and Building Codes.** The City implements and enforces the current California Building Code. The City provides information to all interested parties regarding accommodations in zoning, permit processes, and application of building codes for housing for persons with disabilities.

This Housing Element references an existing program that includes the provision of a new Reasonable Accommodation Program. Under this program, the City will continue to implement a *reasonable accommodation ordinance* to provide exception in zoning and land-use regulations for housing for persons with disabilities. The procedures related to the program's implementation are ministerial in nature with minimal or no processing fee. Improvements may be approved by the Community Development Director as long as a number of findings may be made. First, the request for reasonable accommodation must be used by an individual with a disability protected under fair housing laws. Second, the requested accommodation is necessary to make housing available to an individual with a disability protected under fair housing laws. Third, the requested accommodation would not impose an undue financial or administrative burden on the City. Finally, the requested accommodation would not require a fundamental alteration in the nature of the City's General Plan and Zoning Ordinance.

## HOUSING AFFORDABILITY - HOUSING COSTS IN THE CITY

Housing costs in the City, while lower when compared to some other Southern California communities, are still relatively high when considering the prevailing wages that local residents typically earn. **Table 6-10** summarizes the housing values.



**Table 6-10: Housing Values in Huntington Park (2015)**

<b>Mortgage Range</b>	<b>No. of Units/%</b>
<b>Under \$50,000</b>	<b>60 (1.7%)</b>
<b>\$50,000 to \$99,000</b>	<b>27 (0.8%)</b>
<b>\$100,000 to \$149,999</b>	<b>173 (4.9%)</b>
<b>\$150,000 to \$199,000</b>	<b>324 (9.3%)</b>
<b>\$200,000 to \$299,000</b>	<b>1,187 (33.9%)</b>
<b>\$300,000 to \$499,000</b>	<b>1,542 (44.1%)</b>
<b>\$500,000 to \$999,000</b>	<b>185 (5.3%)</b>
<b>\$1,000,000 and above</b>	<b>0 (0%)</b>
<b>Median</b>	<b>\$298,500</b>
<b>Source: U.S. Census American Fact Finder 2015</b>	

More recent home sales data for the City is provided by Zillow.com. According to home sales data collected in March 2017, a total of 38 units were for sale or sold. The average asking price was approximately \$542,000 and ranged in the asking price of between \$208,000 and \$870,000. Table 6-11 indicates the Fair Market Rent (FMR) data for Los Angeles County between 1980 and 2013. The data shown in **Table 6-11** indicates that rents for two, three, and four bedroom units steadily increased through the mid-1990s where a one year decline was registered. Rents in the latter 1990s and the early 2000s continued to increase. The HUD-formulated FMR schedule serves as a guide for the maximum rents allowable for those units receiving Section 8 assistance. HUD uses the Consumer Price Index (CPI) and the Census Bureau housing survey data to calculate the FMRs for each area.



**Table 6-11: HUD Fair Market Rents Los Angeles-Long Beach SMSA**

Year	1 Bedroom (in dollars)	2 Bedroom (in dollars)	3 Bedroom (in dollars)	4 Bedroom (in dollars)
1980	\$291	\$343	\$380	\$420
1983	\$463	\$538	\$710	\$816
1988	\$588	\$684	\$876	\$990
1990	\$615	\$715	\$916	\$1,035
1995	\$695	\$855	\$1,154	\$1,416
1996	\$675	\$854	\$1,153	\$1,375
1997	\$583	\$737	\$995	\$1,187
1998	\$592	\$749	\$1,011	\$1,206
1999	\$605	\$766	\$1,033	\$1,233
2000	\$605	\$766	\$1,033	\$1,233
2001	\$618	\$782	\$1,055	\$1,260
2002	\$650	\$823	\$1,110	\$1,325
2003	\$764	\$967	\$1,305	\$1,558
2004	\$807	\$1,021	\$1,378	\$1,646
2005	\$900	\$1,124	\$1,510	\$1,816



**Table 6-11:** HUD Fair Market Rents Los Angeles-Long Beach SMSA (continued)

2005	\$900	\$1,124	\$1,510	\$1,816
2006	\$852	\$1,189	\$1,597	\$1,921
2007	\$1,016	\$1,269	\$1,704	\$2,051
2008	\$1,041	\$1,300	\$1,746	\$2,101
2009	\$1,090	\$1,361	\$1,828	\$2,199
2010	\$1,137	\$1,420	\$1,907	\$2,295
2011	\$1,173	\$1,465	\$1,967	\$2,367
2012	\$1,159	\$1,447	\$1,943	\$2,338
2013	\$1,101	\$1,421	\$1,921	\$2,140
Source: U.S. Department of Housing and Urban Development				

Surveys of rents in the City were also conducted during the 2015 Census. **Table 6-12** indicates the average monthly rents for those units identified in the survey. The median rent in the City according to the 2010 Census was \$1,053 per month.

## HOUSING AFFORDABILITY - OVERPAYMENT FOR HOUSING IN HUNTINGTON PARK

**Table 6-13** summarizes 2010 Census figures that indicate the percentage a household paid for housing in 2009 (as indicated in the 2010 Census). As indicated previously, those households that paid more than 30% of their monthly gross income for rent or a mortgage are considered to be overpaying for housing.



**Table 6-12: Contract Rents in Huntington Park (2015)**

Rents/month	No. of Units
Less than \$500	519 (4.8%)
\$500 - \$999	6,072(55.6%)
\$1,000 - \$1,499	3,434 (31.4%)
\$1,500 - \$1,999	776 (7.1%)
\$2,000 - \$2,499	122 (1.1%)
\$2,500 - \$2,999	0 (0.0%)
\$3,000 and over	2 (0.0%)
Median monthly rent	\$942
Source: U.S. Census American Fact Finder 2015	

**Table 6-13: Overpayment 2010**

Percent of Income Devoted to Housing	Occupied Households	
	Renter No. (%)	Owner No. (%)
Less than 15%	397 (24.8%)	641 (33.2%)
15% to 19%	271 (11.8%)	221 (11.4%)
20% to 24%	312 (13.6%)	306 (15.8%)
25% to 29%	275 (12.0%)	170 (8.8%)
30% to 34%	231 (10.0%)	442 (22.9%)
35% or more	728 (31.7%)	15 (0.8%)
Source: U.S. Bureau of the Census, 2010		

**Table 6-14** provides a breakdown of the housing cost affordability standards for various housing unit types based on the number of bedrooms. The housing cost affordability standards are identified according to the following income categories:

- *Very-Low* incomes refer to those household incomes that are 50% of the Los Angeles County median;
- *Low* incomes refer to those household incomes that are between 50% and 80% of the Los Angeles County median; and,
- *Moderate* incomes refer to those households that are between 80% and 120% of the Los Angeles County median household income.

The figures shown in **Table 6-14** indicate the rents and mortgage payment thresholds for various housing unit sizes for the aforementioned income categories.

**Table 6-15** indicates the household income ranges for the various income categories (very low, low, and moderate) as well as the median household income. These figures are arranged according to the number of persons that comprise a household. As is evident from examination of Table 6-15, the income limits increase as the number of persons living in a household increase. For example, a household with one person is considered to be low income if the annual household income is \$39,050 while a household containing five persons is considered to be low income if its annual household income is \$60,200. The information included in Table 6-15 may be used to determine what percentage of a household's income will be expended on a monthly basis for housing. For example, a household consisting of three persons with an annual income of \$23,450 ideally should not spend more than \$645 per month. This figure represents 30% of that household's annual income.



**Table 6-14:** Housing Affordability Standards in (dollars/month)

Unit Type	Very Low	Low	Moderate
<b>Owner-Occupied Units</b>			
1 Bedroom	\$521	\$730	\$1,338
2 Bedroom	\$586	\$821	\$1,505
3 Bedroom	\$651	\$912	\$1,672
4 Bedroom	\$703	\$984	\$1,805
5 Bedroom	\$756	\$1,058	\$1,939
<b>Renter-Occupied Units</b>			
1 Bedroom	\$521	\$626	\$1,147
2 Bedroom	\$586	\$704	\$1,290
3 Bedroom	\$651	\$782	\$1,433
4 Bedroom	\$703	\$844	\$1,547
5 Bedroom	\$756	\$907	\$1,662
Source: U.S. Department of Housing and Urban Development.			

**Table 6-15:** Annual Income Limits for the Los Angeles-Long Beach SMSA

Household Size	30% of Median	Very Low	Low
1 person	\$14,650	\$24,400	\$39,050
2 persons	\$16,780	27,900	44,600
3 persons	\$18,800	31,350	50,200
4 persons	\$20,900	34,850	55,750
5 persons	22,600	37,650	60,200
6 persons	24,250	40,450	64,700
7 persons	25,950	43,200	69,150
8 persons	27,600	46,000	73,600
Source: U.S. Department of Housing and Urban Development, State Income Limits 2015.			

The Comprehensive Housing Affordability Strategy (CHAS) data are used by HOME and CDBG jurisdictions to prepare their consolidated plans. Data showing housing problems and the availability of affordable housing are available through the CHAS website for all counties, places, and CDBG/HOME jurisdictions. The CHAS data concerning overpayment for housing in the City of Huntington Park is summarized in **Table 6-16**. The table indicates the overpayment for extremely low income households (<30% of the County median), very low income households (30% to 50% of the County median), low income households (50% to 80% of the County median), and all of the households in the City. The households that are overpaying for housing are further identified by tenure (owner-occupied and renter-occupied households). Finally, the table indicates senior households and large-family households that are overpaying for housing.



**Table 6-16: Overpayment for Housing in Huntington Park**

<b>Income Distribution Overview</b>	<b>Owner</b>	<b>Renter</b>	<b>Total</b>
Household Income <= 30% HAMFI	370	3,990	4,360
Household Income > 30% to <= 50% HAMFI	535	2,753	3,290
Household Income > 50% to <= 80% HAMFI	1,125	2,570	3,695
Household Income > 80% to <= 100% HAMFI	560	635	1,195
Household Income > 100% HAMFI	1,280	640	1,920
<b>Total</b>	<b>3,8845</b>	<b>10,590</b>	<b>14,455</b>
<b>Housing Problems Overview *</b>	<b>Owner</b>	<b>Renter</b>	<b>Total</b>
Household has 1 of 4 Housing Problems	2,410	8,645	11,055
Household has none of 4 Housing Problems	1,440	1,875	3,315
Cost Burden not available	20	65	85
<b>Total</b>	<b>3,865</b>	<b>10,590</b>	<b>14,455</b>
<b>Severe Housing Problems Overview *</b>	<b>Owner</b>	<b>Renter</b>	<b>Total</b>
Household has 1 of 4 Severe Housing Problems	1,590	6,910	8,500
Household has none of 4 Severe Housing Problems	2,260	3,610	5,870
Cost Burden not available	20	65	85
<b>Total</b>	<b>3,865</b>	<b>10,590</b>	<b>14,455</b>
<b>Housing Cost Burden Overview *</b>	<b>Owner</b>	<b>Renter</b>	<b>Total</b>
Cost Burden <= 30%	1,805	3,950	5,755
Cost Burden > 30% to <= 50%	1,020	2,935	3,955
Cost Burden > 50%	1,030	3,590	4,620
Cost Burden not available	20	110	130
<b>Total</b>	<b>3,865</b>	<b>10,590</b>	<b>14,455</b>

**Table 6-16: Overpayment for Housing in Huntington Park**  
(continued)

Income by Housing Problems (Owners and Renters)	Household has 1 of 4 Housing Problems	Household has none of 4 Housing Problems	Cost Burden not available	Total
Household Income ≤ 30% HAMFI	4,045	230	85	4,360
Household Income > 30% to ≤ 50% HAMFI	3,020	270	0	3,290
Household Income > 50% to ≤ 80% HAMFI	2,620	1,075	0	3,695
Household Income > 80% to ≤ 100% HAMFI	700	495	0	1,195
Household Income > 100% HAMFI	875	1,240	0	1,920
<b>Total</b>	<b>11,065</b>	<b>3,315</b>	<b>85</b>	<b>14,465</b>
Income by Housing Problems (Renters only)	Household has 1 of 4 Housing Problems	Household has none of 4 Housing Problems	Cost Burden not available	Total
Household Income ≤ 30% HAMFI	3,720	205	65	3,990
Household Income > 30% to ≤ 50% HAMFI	2,580	195	0	2,755
Household Income > 50% to ≤ 80% HAMFI	1,785	785	0	2,570
Household Income > 80% to ≤ 100% HAMFI	325	305	0	635
Household Income > 100% HAMFI	255	380	0	640
<b>Total</b>	<b>8,645</b>	<b>1,875</b>	<b>65</b>	<b>10,590</b>
Income by Housing Problems (Owners only)	Household has 1 of 4 Housing Problems	Household has none of 4 Housing Problems	Cost Burden not available	Total
Household Income ≤ 30% HAMFI	325	25	20	370
Household Income > 30% to ≤ 50% HAMFI	460	75	0	535
Household Income > 50% to ≤ 80% HAMFI	835	290	0	1,125
Household Income > 80% to ≤ 100% HAMFI	375	190	0	560
Household Income > 100% HAMFI	420	680	0	1,280
<b>Total</b>	<b>2,410</b>	<b>1,440</b>	<b>20</b>	<b>3,885</b>

**Table 6-16:** Overpayment for Housing in Huntington Park (continued)

<b>Income by Cost Burden (Owners &amp; Renters)</b>	<b>Cost burden &gt; 30%</b>	<b>Cost burden &gt; 50%</b>	<b>Total</b>
Household Income <= 30% HAMFI	3,965	3,350	4,360
Household Income > 30% to <= 50% HAMFI	2,680	800	3,290
Household Income > 50% to <= 80% HAMFI	1,350	335	3,695
Household Income > 80% to <= 100% HAMFI	375	85	1,195
Household Income > 100% HAMFI	200	45	1,915
<b>Total</b>	<b>8,570</b>	<b>4,615</b>	<b>14,455</b>
<b>Income by Cost Burden (Renters only)</b>	<b>Cost burden &gt; 30%</b>	<b>Cost burden &gt; 50%</b>	<b>Total</b>
Household Income <= 30% HAMFI	3,645	3,105	3,990
Household Income > 30% to <= 50% HAMFI	2,225	485	2,755
Household Income > 50% to <= 80% HAMFI	595	0	2,570
Household Income > 80% to <= 100% HAMFI	60	0	635
Household Income > 100% HAMFI	0	0	640
<b>Total</b>	<b>6,525</b>	<b>3,590</b>	<b>10,590</b>
<b>Income by Cost Burden (Owners only)</b>	<b>Cost burden &gt; 30%</b>	<b>Cost burden &gt; 50%</b>	<b>Total</b>
Household Income <= 30% HAMFI	320	245	370
Household Income > 30% to <= 50% HAMFI	460	320	535
Household Income > 50% to <= 80% HAMFI	755	335	1,125
Household Income > 80% to <= 100% HAMFI	315	85	560
Household Income > 100% HAMFI	200	45	1,280
<b>Total</b>	<b>2,050</b>	<b>1,030</b>	<b>3,865</b>

1. The four housing problems are: incomplete kitchen facilities, incomplete plumbing facilities, more than 1 person per room, and cost burden greater than 30%.
2. The four severe housing problems are: incomplete kitchen facilities, incomplete plumbing facilities, more than 1.5 persons per room, and cost burden greater than 50%.
3. Cost burden is the ratio of housing costs to household income. For renters, housing cost is gross rent (contract rent plus utilities). For owners, housing cost is "select monthly owner costs", which includes mortgage payment, utilities, association fees, insurance, and real estate taxes.

Source: CHAS Data Book 2012 (for Huntington Park, California).

## GOVERNMENTAL CONSTRAINTS - PROCESSING PROCEDURES

The City works closely with developers to expedite approval procedures so as not to put any unnecessary timing constraints on development. For a typical project, an initial pre-consultation meeting with the Community Development Department, Public Works, and the Fire Department is arranged to discuss the development proposal. Then a tentative parcel map application or a description of project must be filed with a site plan, which is first reviewed by the planning department and other agencies, such as public works, for consistency with City ordinances and General Plan guidelines.

The City also encourages the joint processing of related applications for a multiple-family project. For example, a request for a rezoning may be reviewed in conjunction with the site plan, a tentative tract map, and any variances. Such procedures save time, money, and lowers the cost to the developer. As indicated previously, the City works closely with developers to expedite approval procedures so as not to put any unnecessary timing constraints on development. In addition, the City makes full use of the CEQA Infill Housing Exemption.

For a typical housing project, an initial pre-consultation meeting with the Community Development Department, Public Works, and the Fire Department is arranged to discuss the development proposal. After the project is approved, the building department performs plan checks and issues building permits. Throughout the construction of a multiple-family development, the Building Department will perform building checks to monitor the progress of the project. This process does not put an undue time constraint on most developments because of the close working relationship between City staff, developers, and the decision-making body. The developer must also determine if the proposed project is a "Priority Project" and subject to the National Pollutant Discharge Elimination System (NPDES) Permit's



Standard Urban Stormwater Mitigation Plan (SUSMP) requirements. If the project is subject to these requirements, it must meet SUSMP requirements prior to issuance of grading and building permits. In addition, school fees must be paid to school districts prior to issuance of building permits. School fees for Los Angeles School District is \$4.00 per livable square-foot, the fee varies between school districts.

**Table 6-17** identifies the typical processing time most common in the entitlement process. It should be noted that each project does not necessarily have to complete each step in the process (i.e., small scale projects consistent with General Plan and Zoning designations do not generally require Environmental Impact Reports [EIR], General Plan Amendments, Rezones, or Variances).

**Table 6-17: Permit Review Timelines for the City of Huntington Park**

Type of Approval or Permit	Typical Processing Time	Approval Body
Minor Development Permit	14 days	City Staff
Minor Variance	30 – 45 days	C. D. Director
Minor Cup	30 – 45 days	C. D. Director
Conditional Use Permit	60 – 90 days	Planning Commission
Development Permit	60 – 90 days	Planning Commission
Variance	60 – 90 days	Planning Commission
Zone Change	90 – 120 days	City Council
General Plan Amendment	90 – 120 days	City Council
Final Subdivision Map	6 – 8 months	City Council
Tentative Subdivision Maps	60 – 90 days	Planning Commission
Parcel Maps	30 – 45 days	City Engineer
Negative Declaration	60 – 120 days	City Council/Planning Commission
Environmental Impact Report	180 days +	City Council
Source: City of Huntington Park, 2019.		



**Table 6-18** compares the City's plan check fees with those of the neighboring cities. As indicated in the table, the City's fees are not substantially greater than that compared to other cities in the area.

**Table 6-18:** Comparison of Plan Check Fees

Planning Activity	City Check Fee
Huntington Park	\$132.16
Bell	\$59.21
Maywood	\$180.70
Bell Gardens	\$77.10
South Gate	\$63.00
Downey	\$60.00
Cudahy	\$56.25
Source: City of Huntington Park 2019.	

The City of Huntington Park Housing and Community Development Division is responsible for ensuring that all new construction is performed and completed in a safe and proper manner using the correct materials and methods. Permits are required for any changes, including electrical, plumbing, or building changes to any property. Applicants and/or contractors are required to bring their plans to City Hall where a plan checker or building inspector will examine the plans for approval. The building permit provides evidence that the contractor has complied with the Building Code and the City has approved the proposed construction. **Table 6-19** estimates the building fees for a typical residential development.



**Table 6-19: Typical Planning and Processing Fees**

Description	Fee
Building Permit	\$2,602.58
Plan Check Fee	\$2,799.14
Electrical Permit	\$1,001.12
Plumbing Permit	\$495.36
Mechanical Permit	\$294.56
Grading Permit	--
Sewer/Septic Permit	\$628.62
Source: City of Huntington Park, 2019.	

The City's permit fees are based on the valuation of the proposed project that utilizes the Los Angeles County fee schedule. The fees shown in Table 6-19 are applicable to both single-family and multiple-family development. The processing fees are well under 1% of the total development cost. Assuming a 1,000 square-foot unit, the total development fees (including school district fees) would be approximately \$4,879 per unit. This assumes 20 electrical fixtures, five plumbing fixtures, one sewer connection, and one thousand square feet of floor area. The permit fees account for approximately 2.2% of a residential unit costing \$225,000. Permit fees and approval time frames do not pose a constraint to the development of housing in Huntington Park. The City employs a plan check process that applies to all residential development including multi-family housing. Plan check for the processing of building permits typically require seven to ten working days, depending on the City's work load. The City of Huntington Park has adopted the 2016 California Building Code (CBC) with 2017 Los Angeles County Amendments, which establishes the minimum standards for new construction.

There are no extraordinary regulations applied by the City that would hinder future



housing development. The entitlement process for discretionary permits, a zone change, general plan amendment, tract map, and conditional use permit application typically require 60 to 90 days to receive final approval. Zone changes and general plan amendments are first heard by the City Council (which also acts as the Planning Commission). For the majority of these cases, the City Council will review the item and render a decision within 90 days of application submittal.

## OFF-SITE IMPROVEMENTS

For a typical single-family home there are no off-site fees related to the construction of new infrastructure, park fees, or Mello-Roos fees. The City may require that damaged ROW be replaced/repared though the basic street system and supporting infrastructure has been installed as part of the area's historic development. The City's requirements for off-site improvements related to multiple-family developments are not overly or unnecessarily restrictive. The density, setback, and other standards regulating development within Huntington Park are consistent with those being used by other surrounding communities and will not inhibit the development of a range of housing types within the City. The City has not imposed any moratoria, open-space requirements, or prohibitions against multi-family housing that would potentially inhibit the development of new housing. The City will continue to review the general development standards such as street width, parking lanes, and sidewalks.

## LAND USE CONTROLS - BASE ZONE DISTRICTS

The Huntington Park Zoning Code and Zoning Map are the primary implementation ordinances of the land use element. The zoning map and ordinance indicates the specific land uses allowed in the City and establishes regulations and standards for use and development. The City's Zoning Code consists of eight base zone districts that include the following: R-L, R-M, R-H, C-P, C-N, C-G, MPD, and OS.<sup>3</sup> Five zones, R-L, R-M, and R-H, C-P, and C-N are applicable to residential development. The R-L (Residential, Low) zone generally applies to single-family detached residential development. The R-M (Residential, Medium) zone generally applies to higher density single-family residential development, duplexes, and lower density multiple-family developments. Finally, the R-H (Residential, High) zone applies to higher density multiple-family developments.<sup>4</sup>

<sup>3</sup> City of Huntington Park Municipal Code. Title 9 Zoning.

<sup>4</sup> City of Huntington Park Municipal Code. Title 9 Zoning, Chapter 4, Zoning Districts, Article 1 Residential Zones.



**Table 6-20:** City of Huntington Park Zoning Ordinance, Base Zone Districts

Zone	Uses	Density (DU/acre or FAR)	Min. Lot Size	Min. Lot Coverage	Max. Height
R-L (Residential, Low)	Single-family	8.712 DU/Ac.	5,000 sq. ft.	45%	35 ft.
R-M (Residential, Medium)	Single-family, Duplex	17.424 DU/Ac.	5,000 sq. ft.	55%	35 ft.
R-H (Residential, High)	Condominiums, Apartments	20.0 DU/Ac.	15,000 sq. ft.	65%	45 ft.
C-N (Neighborhood Commercial)	Condominiums, Multiple Family (20+ units/acre), SROs	20.0 DU/Ac.	5,000 sq. ft.	None	40 ft.
C-P (Professional Commercial)	Condominiums, Multiple Family (20+ units/acre),	20.0 DU/Ac.	5,000 sq. ft.	None	40 ft.
Source: Huntington Park Zoning Code, 2017					

## LAND USE CONTROLS - OVERLAY ZONE DISTRICTS

In addition to the aforementioned base zone districts, the City of Huntington Park Zoning Code includes a number of *overlay zones*. Special regulations or incentives are included in the overlay zone to facilitate certain regulations in the geographic area that is subject to the overlay zone. The overlay zones included in the City of Huntington Park Zoning Code are outlined below:

- **Medium Density Overlay Zone.** The purpose of this overlay zoning district is to provide for multi-family residential units up to 17.424 units per acre within the underlying commercial zoning district. The Medium Density Overlay zoning district identifies parcels that are suitable for the development of medium density housing, either as the primary use on the parcel or in conjunction with other permitted uses.<sup>5</sup>
- **Senior Citizen Housing Overlay Zone.** The purpose of this overlay zoning district is to provide for senior citizen housing at up to 225 dwelling units per acre, generally located in high-rise developments with shared open space,

<sup>5</sup> City of Huntington Park Municipal Code. *Title 9 Zoning, Chapter 4, Zoning Districts, Article 5 Overlay Zones.*



meeting facilities and reduced parking requirements. Single Room Occupancy (SRO) facilities are also allowed at up to 400 units per acre.<sup>6</sup>

- **Single Room Occupancy Overlay Zone.** The purpose of this overlay zoning district is to provide for alternative types of residential living opportunities to help meet the needs of the community. All Single Room Occupancy (SRO) facilities allowed under this overlay zoning district shall be developed/operated in compliance with the provisions/standards contained in Chapter 3, Article 1 (Single Room Occupancy Facilities).<sup>7</sup>
- **Affordable Housing Overlay Zone.** The purpose of this zoning district is to facilitate the development of affordable family housing at densities up to seventy (70) dwelling units per acre. Senior citizen housing at a density of 225 units per acre and single room occupancy (SRO) facilities at a density of 400 units per acre is also permitted.

The City's overlay zones are summarized in **Table 6-21**.

**Table 6-21:** City of Huntington Park Zoning Ordinance, Special and Overlay Zones for Housing

Zone	Uses	Density (DU/acre or FAR)	Min. Lot Size	Min. Lot Coverage	Max. Height
Medium Density Overlay Zone	Medium Density Housing	17.424 DU/Ac.	5,000 sq. ft.	55%	35 feet.
Affordable Housing Overlay Zone	Affordable Housing	70 DU/Ac.	The Base Zone regulations will apply.		
	Senior Housing	225 DU/Ac.	The Base Zone regulations will apply.		
	SRO Housing(2)	400 DU/Ac.	The Base Zone regulations will apply.		
Source: Huntington Park Zoning Code, 2019.					

<sup>6</sup> Ibid.

<sup>7</sup> City of Huntington Park Municipal Code. *Title 9 Zoning, Chapter 4, Zoning Districts, Article 5 Overlay Zones.*



## LAND USE CONTROLS - SPECIFIC PLAN

The purpose of a *specific plan* is to provide a policy and regulatory bridge between the City of Huntington Park General Plan and individual project-level development. Specific plans are designed to provide specific land use regulations and development guidelines that govern the land use and development standards for a particular geographic area. The City has adopted a single specific plan, the Downtown Specific Plan (DTSP) that is applicable to the central business district or downtown.<sup>8</sup> The DTSP builds upon and refines economic development strategies developed specifically for the downtown area focusing on beautification of public spaces and streetscapes and storefront. An overall goal of the DTSP is the orderly development of downtown area consistent with the City's General Plan along with the community's vision for the area. The DTSP covers an area of approximately 85 acres in the City of Huntington Park's Downtown. The DTSP area extends from Randolph Street in the north to Florence Avenue in the south. The eastern boundary is generally Seville Avenue, except for an area that extends along Zoe Avenue to Miles Avenue, and the western boundary is Rugby Avenue. Pacific Boulevard occupies the central portion of the DTSP area and is considered the City's Central Business District. The DTSP divides the downtown area into four Districts (refer to **Exhibit 6-5**). Within each District there is particular vision for future development. Land use and development standards, as well as design guidelines, give direction for each of these Districts to achieve the future state envisioned by the community.<sup>9</sup> The four Districts are as follows:

- *District A – Gateway.* District A encompasses parcels at the intersections of Randolph Street with Pacific Boulevard and Rita Avenue, and Florence Avenue with Rugby Avenue, Pacific Boulevard, Rita Avenue, and Seville Avenue.
- *District B – Festival.* District B encompasses all parcels fronting on Pacific Boulevard, except those parcels at the intersections with Randolph Street and Florence Avenue contained in District A as described above.
- *District C – Neighborhood.* All parcels between Rugby Avenue and Seville Avenue that are not included in District A or District B are part of District C, except for select parcels at the intersection of Seville Avenue and Zoe Avenue.

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<sup>8</sup> RRM Design Group. *Downtown Huntington Park Specific Plan*. Plan dated August 4, 2008.

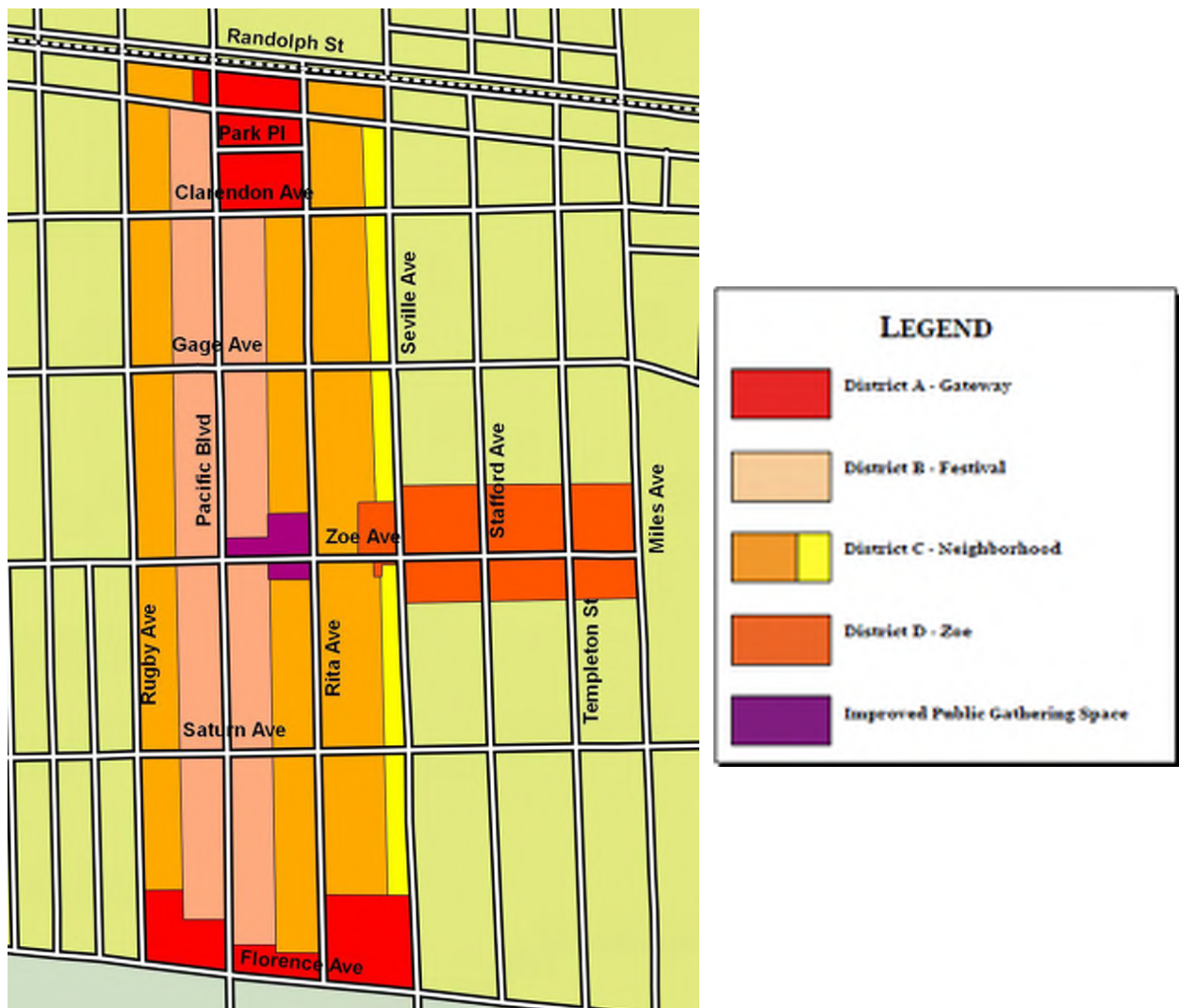
<sup>9</sup> City of Huntington Park Municipal Code. *Title 9 Zoning, Chapter 4, Zoning Districts, Article 5 Overlay Zones*.



- *District D – Zoe [Avenue].* District D encompasses those parcels bordering Zoe Avenue from the alley separating Rita Avenue and Seville Avenue to the intersection with Miles Avenue.



## Exhibit 6-5: Map of the Downtown Specific Plan (DTSP)



Specific land uses and development that is permitted in the R-L, R-M, and R-H zone districts are listed below in **Table 6-22**.

**Table 6-22: Housing Types Permitted Under the Zone Districts**

Use	Zone District		
	R-L	R-M	R-H
Condominiums	D	D	D
Small Family Daycare	P	P	P
Large Family Daycare	LLC	LLC	LLC
Density Bonus Affordable	P	P	P
Manufactured Housing	D	D	D
Multi-Family Housing	–	D	D
Second Unit	P	–	–
Senior/Congregate Care	–	–	C
Single Family	P	P	P
Single Room Occupancy	–	–	D
<b>P = Permitted D = Use requires a Development Permit C = Conditionally Permitted – = Prohibited LLC = Large Child Care Permit</b>			

Residential development standards in the residential zone districts are summarized below in **Table 6-23**.



**Table 6-23: Residential Development Standards**

Zone District	Maximum Units/Acre	Minimum Lot Area	Maximum Lot Coverage	Maximum Height	Maximum Lot Width	Maximum Lot Depth
R-L	8.712	5,000 sq. ft.	45%	35 feet	45 feet	80 feet
R-M	17.424	5,000 sq. ft.	55%	35 feet	45 feet	100 feet
R-H	20.0	15,000 sq. ft.	65%	45 feet	100 feet	100 feet
Source: City of Huntington Park, 2019.						

## NON-GOVERNMENTAL CONSTRAINTS TO HOUSING DEVELOPMENT

Three market factors are cited by State law as a necessary part of the constraints analysis: 1) land cost; 2) construction costs; and, 3) financing availability. Housing costs as a constraint on affordability must be examined in light of the rental and ownership costs within the means of various economic segments. State law identifies four economic segments: Very low-income; Low-income; Moderate-Income; and High-Income. The annual income limits of these four groups are further defined by the U.S. Department of Housing and Urban Development in reference to the median income for Los Angeles County and household size.

## NON-GOVERNMENTAL CONSTRAINTS - MARKET CONSTRAINTS

Affordable housing costs are computed on a basis of 30% of monthly income. The affordable ownership costs, or purchase price of a home, are calculated on the basis of the rule of thumb of 2.5 times the annual household income. These affordable housing costs then can be compared to the prevailing costs in Huntington Park to confirm the existence of market constraints. A household is generally considered to be overpaying for housing if it is paying more than 30% of its gross monthly income for housing.



One of the major problems facing households in the City of Huntington Park, and the broader regional housing market, is affordability. This problem is related to the match between household income and the size and cost of owning or renting a home. The Census data indicated that for owner-occupied housing units, median mortgage and selected monthly service costs in 2010 were \$1,829. In 2010, owner-occupied households (50.7%) expended more than 35% of their income for housing. These housing expenditures reflected the sum of mortgages, real estate taxes, insurance, association fees, and utilities. Monthly payments for homeowners more than quadrupled in the ten years between 1980 and 2010, and the percentage of households paying 30% or more for housing nearly doubled during this same period.

For renters, the median gross rent per month increased from \$211 in 1980 to \$979 in 2010. This dollar amount refers to the contract rent (i.e., monthly rent agreed to, or contracted for) plus the estimated average cost of utilities if paid for by the renter. This definition was used by the Census in an attempt to eliminate differentials due to varying practices in rent structuring. According to the most recent Census, a total of 3,309 renter-occupied households (47.8%) paid in excess of 30% of their monthly incomes for housing.

Although private financing is generally available at market rates, low- and moderate-income households usually need below market rate financing to enable them to repair existing homes or purchase resale or new housing units. Also, all potential developers of housing projects are provided information on the various Los Angeles County financing programs available for low-income rental construction or rehabilitation projects. Additionally, a survey of local banking institutions completed as part of this Housing Element's preparation revealed that redlining does not appear to be occurring in Huntington Park. In fact, a number of banks have established programs to encourage lower-income residents to purchase homes, and to improve homes that they already own.

## **NON-GOVERNMENTAL CONSTRAINTS - LAND PRICES**

Land costs are a major contributor to overall housing production prices. The balance of the City's housing production will occur in the infill areas. In these areas, the land costs are, in part, associated with the costs of the single-family dwellings now on the sites. Land prices for new residential construction range from \$20 to \$25 per



square-foot. The practical effect of land prices relates primarily on infill sites that are underutilized. Consequently, the land costs (i.e., resale homes) would need to be adjusted to per-unit land costs based on the existing density.

## **NON-GOVERNMENTAL CONSTRAINTS - CONSTRUCTION COSTS**

Construction costs include the materials and labor necessary to build the structure. These costs will vary widely depending on the quality features (e.g., size, roofing, carpeting, etc.) that are incorporated in the structure. The cost for the construction of a single-family home is in the area of \$50 to \$75 per square-foot.

## **NON-GOVERNMENTAL CONSTRAINTS - ENVIRONMENTAL CONSTRAINTS**

Every hazardous material handler is required to submit a business plan and an inventory of hazardous substances and acutely hazardous materials to the Huntington Park Police Department and the Los Angeles County Fire Department on a yearly basis. If the hazardous materials inventory of a business should change, a revised business plan must be submitted. Hazardous material users and generators in the City include gasoline stations, auto repairs shops, printers and photo labs, clinics, dry cleaners, schools, fire stations, and a variety of other commercial and industrial land uses.

The State of California defines a hazardous material as a substance that is toxic, ignitable or flammable, or reactive and/or corrosive. An extremely hazardous material is defined as a substance that shows high acute or chronic toxicity, carcinogenicity, bio-cumulative properties, persistence in the environment, or is water reactive (California Code of Regulations, Title 22). The Uniform Fire Code includes criteria designed to minimize the risk of an accident. These guidelines are to be followed when storing, using, or transporting hazardous materials, and include secondary containment of substances, segregation of chemicals to reduce reactivity during a release, sprinkler and alarm systems, monitoring, venting and auto shut-off equipment, and treatment requirements for toxic gas releases.



## ENVIRONMENTAL CONSTRAINTS - SEISMICITY

Major faults in the region include the Whittier Elsinore, Norwalk, Newport Inglewood, Santa Monica, Sierra Madre, Palos Verdes, and San Andreas Faults. According to the Los Angeles County Safety Element, no known or suspected active fault traces pass through or are located near the City. There are no designated Alquist-Priolo Special Studies Zones found within the City. The City is located within an area that may be subject to liquefaction hazards. However, the level of risk within the City is no greater than that anticipated for the region.

The four largest recent earthquakes that have caused major damage in the Los Angeles basin include the 1933 Long Beach (Magnitude 6.3), 1971 San Fernando (Magnitude 6.4), the 1987 Whittier Narrows (Magnitude 5.9), and the 1994 Northridge (Magnitude 6.7) earthquakes. The 1933 Long Beach earthquake occurred on the southern segment of the Newport-Inglewood fault, from Newport Beach to Signal Hill. The 1971 San Fernando earthquake occurred along the San Fernando segment of the Sierra Madre fault zone. The Whittier Narrows earthquake occurred on the Elysian thrust fault in 1987. Finally, the most recent major earthquake, the Northridge earthquake, occurred on the Oakridge fault in the San Fernando Valley in January 1994. A study of earthquake hazards by the United States Geological Survey (USGS) indicates that the Huntington Park area has moderate to high potential for liquefaction. Areas containing shallow groundwater within 30 feet or less of the ground surface are susceptible to liquefaction hazards during seismic shaking.

The Alquist-Priolo Earthquake Fault Zoning Act's main purpose is to prevent the construction of buildings used for human occupancy on the surface trace of active faults.<sup>10</sup> A list of cities and counties subject to the Alquist-Priolo Earthquake Fault Zones is available on the State's Department of Conservation website. The City of Huntington Park was not included in the list; therefore, no risk from potential fault rupture is expected.<sup>11</sup> However, the City is located in an area that is at risk for ground shaking. Federal Emergency Management Agency (FEMA) determined that if a 7.2 earthquake were to strike to Newport Inglewood Fault, Huntington Park would experience very strong to severe ground shaking. Huntington Park is located in a

<sup>10</sup> California Department of Conservation. *What is the Alquist-Priolo Act* <http://www.conservation.ca.gov/cgs/rghm/ap/Pages/main.aspx>.

<sup>11</sup> California Department of Conservation. Table 4, Cities and Counties Affected by Alquist-Priolo Earthquake Fault Zones as of January 2010.



liquefaction zone. Liquefaction is the process by which the ground soil loses strength due to an increase in water pressure following seismic activity. The liquefaction risk is no greater for the project site than it is for the surrounding areas and cities; therefore, the potential impacts regarding liquefaction are anticipated to be less than significant. Conformity to the most current State and City building codes will reduce the impacts of ground shaking to levels that are less than significant. Lastly, the potential for landslides is non-existent since the site and surrounding areas are generally level. The potential impacts are expected to be less than significant with adherence to the most stringent and pertinent build code requirements.

## ENVIRONMENTAL CONSTRAINTS - FLOODING AND INUNDATION

According to the Federal Emergency Management Agency (FEMA) flood insurance map obtained from the Los Angeles County Department of Public Works, the City is located in Zone X (refer to **Exhibit 3-5**). This flood zone has an annual probability of flooding of less than 0.2 percent and represents areas outside the 500-year flood plain. Thus, properties located in Zone X are not located within a 100-year flood plain. Large areas downstream of the Hansen and Sepulveda Dams, including the City of Huntington Park, are at risk of inundation in the event of dam failure. The Hansen and Sepulveda Dams are operated by the Army Corps of Engineers and were constructed primarily for flood control. The flood hazards associated with dam failure will affect most areas south of the dams.

The Hansen Dam is located on the northern edge of the San Fernando Valley, approximately four miles west of Sunland. The inundation area of the Hansen Dam include areas along the Tujunga Creek and several communities in the valley, the City of Los Angeles, cities in south central Los Angeles, and areas along the Los Angeles and San Gabriel Rivers. The City of Huntington Park is located approximately 25 miles south of the dam but dam failure will affect the entire City of Huntington Park. Flood waters will arrive 17.75 hours after failure with a maximum depth of 1 foot approximately 21 hours after failure.



The Sepulveda Dam is located on the Los Angeles River near the intersection of the Ventura and San Diego Freeways near the City of Van Nuys. The probable maximum flood from the Sepulveda Dam is expected to last four days with a total volume of 163,200 acre-feet. The flood will affect areas along the Los Angeles River, and the cities of Los Angeles, Huntington Park, South Gate, Compton, Lynwood, Maywood, and Bell. The flood waters are anticipated to reach the City approximately ten hours after failure. A maximum flood elevation of 2 feet is expected approximately 12 hours after failure.

## INFRASTRUCTURE CONSTRAINTS - WATER SYSTEM

The City of Huntington Park is served by four water companies, which obtain their supply of water from two sources: groundwater from local wells and water supplied by the Metropolitan Water District. The four water companies are listed below.<sup>12</sup>

- *Maywood Mutual Water Company* – The Maywood Mutual Water Company serves the northeast portion of the City. The service boundaries extend east to west from Maywood Avenue to the City’s border with Maywood, and north to south from Slauson Avenue to Randolph Avenue. Approximately 70% of the Maywood Mutual Water Company’s costumers reside in Huntington Park.
- *Walnut Park Mutual Water Company* – Walnut Park Mutual Water Company serves the odd side of Walnut Street (addresses 2901-3501 Walnut Street).
- *Golden State Water Company* – The City of Huntington Park is located within the Central Basin West service area of the Golden State Water Company. Golden State Water Company serves the western portion of the City. The service boundaries extend from Slauson Avenue to the north to Florence Avenue to the south, and from the City’s western border with Florence-Graham to west to Alameda Street to the east.
- *Severn Trent Services* – Severn Trent is the City’s main provider of water and operates multiple wells in the City, including Wells Number 12, 14, and 17.

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<sup>12</sup> City of Huntington Park.



## INFRASTRUCTURE CONSTRAINTS - SEWERS

The City of Huntington Park Public Works Department maintains the City's sewer system. Sewage generated by the City is conveyed to regional sewage treatment facilities maintained and operated by the Los Angeles County Sanitation District. Wastewater collected by the LACSD is conveyed to the Joint Water Pollution Control Plant located at 24501 Figueroa Street in Carson. This treatment plant provides primary and secondary treatment for approximately 280 million gallons per day (mgd) and has a total permitted capacity of 400 mgd. Thus, a remaining capacity of 120 mgd is available for future development in the region.

## INFRASTRUCTURE CONSTRAINTS - STORM DRAINAGE

There is minimal flood risk in the City of Huntington Park (Zone X), as indicated in the Federal Emergency Management Agency's Flood Insurance Rate Program. The Los Angeles River Channel is a 500-foot wide concrete channel that is designed to handle the storm water runoff from the Los Angeles area. The river is located north and east of the City approximately 1.90 miles to the east. The maintenance of the river is the responsibility of the Los Angeles County Department of Public Works, Flood Control District.<sup>13</sup> Flooding and inundation hazards are described in the Safety Element. The majority of the storm drains in the City are owned and maintained by the Los Angeles County Flood Control District that connects directly to the Los Angeles River to the east. There are storm drains along the major arterials.

## INFRASTRUCTURE CONSTRAINTS - UTILITIES AND COMMUNICATIONS

Natural gas service to the City is provided by the Southern California Gas Company (a subsidiary of SEMPRA Energy) and electricity is provided by the Southern California Edison (SCE) Company. Southern California Gas Company serves more than 21 million residents throughout Central and Southern California. Electrical power service to the City is provided by Southern California Edison (SCE). SCE maintains overhead and underground lines in the City to serve the energy demands of local residents and businesses.

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<sup>13</sup> Los Angeles Department of Public Works. *Flood Zone Determination Website*. <http://dpw.lacounty.gov/wmd/floodzone/>



## DRY UTILITIES (ENVIRONMENTAL CONSTRAINTS)

Trash collection is provided by the United Pacific Waste and Waste Management, Inc. and other private haulers for disposal into the Commerce Incinerator or in area landfills. The majority of the disposable solid waste will be taken to the Commerce “Waste-to-Energy” incineration plant for incineration. Recyclable waste will be sorted from the waste street and sent to a recycling facility. Residual waste associated will also be disposed of at area landfills. All residential development in the City is required to adhere to City and County ordinances with respect to waste reduction and recycling. Electricity is provided by Southern California Edison and natural gas service to individual properties is provided by the Southern California Gas Company. The Southern California Gas Company offers rebates on qualifying clothes washers, dishwashers, furnaces, water heaters, and insulation. Every residential property in the City has access to phone and internet services through a variety of service providers.

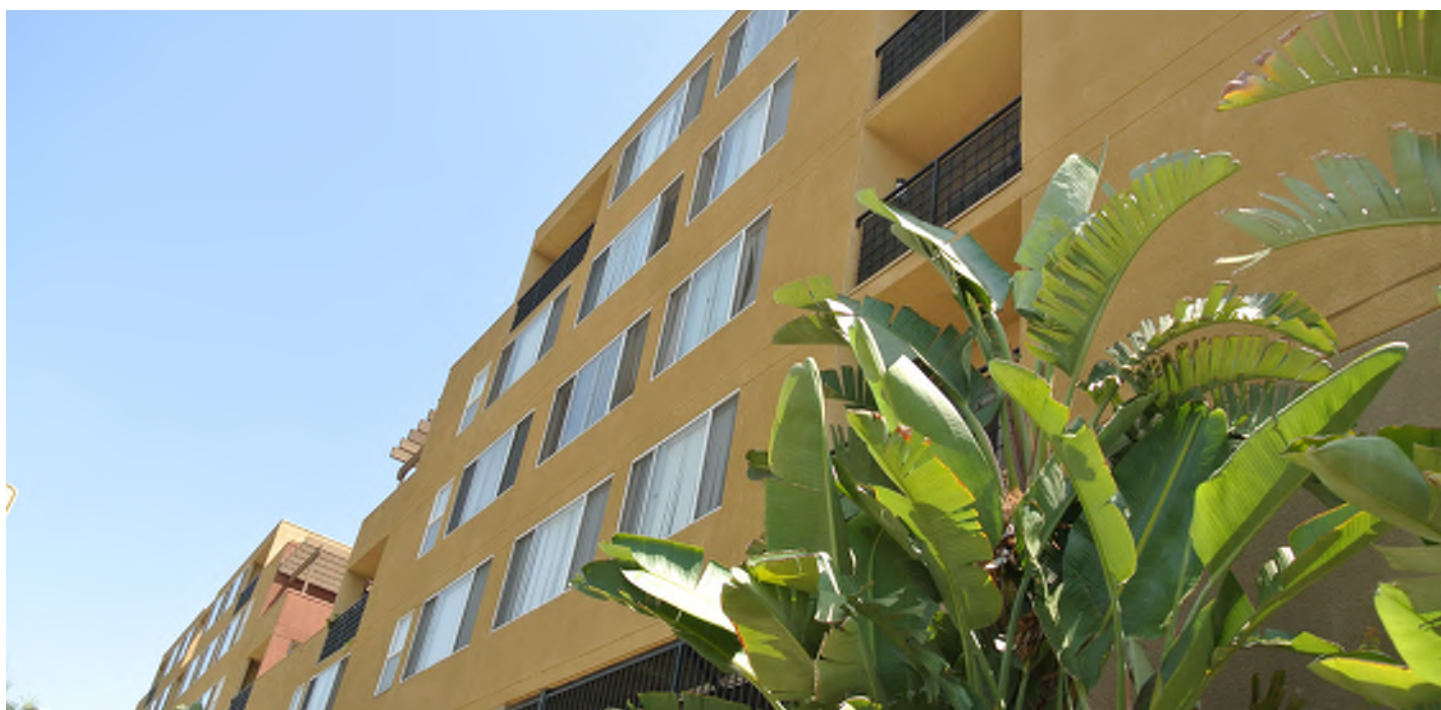
## PUBLIC HOUSING AND THE RISK OF CONVERSION

Huntington Park has an active history of supporting affordable housing development. The City has facilitated the development of eight residential developments, and the acquisition/rehabilitation of six projects with long-term affordability covenants on all or some of the units. These projects include: Concord Huntington Park, Seville Gardens, Casa Rita, Rugby Senior Apartments, Casa Bonita, Rita Court, Santa Fe Village, and Casa Bella (new construction), and Bissell Apartments, Bissell II, Bissell III, 6700 Middleton Street, 6822 Malabar Street, and the Mosaic Gardens projects (acquisition/rehabilitation). These 14 projects provide a total of 557 affordable units, including 361 very low income (30% MFI), 149 low income (50% MFI) units, and 47 moderate income (80% MFI) units. Of the total 557 units, 361 are senior units, 185 are family units, and 11 are family, transitional age youth units.

The City’s affordable projects are financed through a variety of funding sources, including tax credits and HOME funds, which require long-term affordability controls. None of these projects are at risk of conversion to market rate for at least 15 years. In 1999, the 162-unit Concord Huntington Park development pre-paid its HUD mortgage and converted to market rate. However, the City utilized a Multifamily Mortgage Revenue Bond to maintain project affordability for an additional 30 years.



The Housing Choice Voucher (HCV) program, formerly the Section 8 program, is HUD's largest program that helps low-income families, the elderly, and the disabled find affordable decent, safe, and sanitary housing in the private market. Participants receive federally subsidized vouchers that they can use to rent the home or apartment of their choosing, provided that it meets the requirements of the program and agreement of the landlord. The funding assistance is provided to the family or individual, the voucher holder, and can move with the family or individual rather than being tied to the property or unit.



The Housing Authority of the County of Los Angeles (HACoLA) is the local public agency providing Housing Choice Vouchers within Huntington Park. According to a special data run conducted by HACoLA for the City, as of September 2014, there were a total of 458 Huntington Park households receiving tenant-based Housing Choice Vouchers. Nearly 90% of the City's Section 8 recipients are of Hispanic origin, consistent with the ethnic make-up of the City's population, which is 97% Hispanic. Elderly households comprise approximately two-thirds of the City's Section 8 recipients (295 households), indicative of several large senior housing complexes with significant numbers of Section 8 tenants. The City also has a high proportion of disabled households receiving Section 8 (265 households), although many of these households are also likely to be seniors. There are no public housing projects located within Huntington Park.

## 6.3 PLANNING VISION

**LAND USE**  
USOS DEL TERRENO

**CIRCULATION**  
CIRCULACIÓN

The land use element designates the type, intensity, and general distribution of uses of land for housing, business, industry, open space, education, public buildings, waste disposal facilities, and other categories of public and private uses.

El elemento de uso de la tierra designa el tipo, la intensidad y la distribución general de los usos de suelo para vivienda, negocio, industria, espacio abierto, la educación, los edificios públicos, instalaciones de eliminación de residuos, y otras categorías de usos públicos y privados.

What services do you need in your neighborhood?  
¿Qué servicios se necesitan en su barrio?

Would you like a public park/ open space near your house?  
¿Gustaría un parque público / espacio abierto cerca de su casa?

Which commercial center do you prefer?  
¿Cuál centro de comercio prefiere?

What form of transportation do you use most?  
¿Qué tipo de transporte es lo que más utiliza?

What is your daily average travel time?  
¿Cuál es su tiempo de viaje promedio diario?

On a scale from 1- 5, with the existing public transportation, how satisfied are you?  
En una escala del 1 al 5, ¿cómo está usted con el sistema de transporte público que existe?

The City of Huntington Park, with the implementation of the Housing Element, seeks to promote an orderly pattern of quality future development to achieve a complete and controlled balance of growth among land uses. The following objectives will be realized through the implementation of the policies and programs contained in the Housing Element:

- To promote the conservation of housing within the City while;
- To provide for the development of new housing in the City of Huntington Park;
- To continue to identify adequate sites for new residential in the City;
- To strive to remove those constraints that may impede new housing development in Huntington Park; and,
- To ensure that fair and equal housing practices are observed at all times.

The City's Housing Element policies are outlined in the section that follows. The policies are arranged under each of the issue areas discussed above. The following policies will establish the policy framework for the Housing Element.

## HOUSING ELEMENT POLICIES

### ISSUE AREA: HOUSING CONSERVATION

- **Housing Element Policy 1.** The City of Huntington Park shall promote the maintenance of the existing housing units and shall require property owners to maintain their housing so the units are safe, healthful, and aesthetically pleasing.
- **Housing Element Policy 2.** The City of Huntington Park shall minimize housing displacement and require expeditious and equitable relocation in the event units are demolished.
- **Housing Element Policy 3.** The City of Huntington Park shall vigorously oppose any public agency initiative that would result in the removal of existing housing units without the provision of replacement housing.
- **Housing Element Policy 4.** The City of Huntington Park, where possible, shall work with property owners to bring any illegal additions or building construction up to the current Building Code and other health and safety code requirements.

### ISSUE AREA: DEVELOPMENT OF NEW HOUSING

- **Housing Element Policy 5.** The City of Huntington Park shall encourage an adequate supply of dwelling units to meet the needs of all income groups through its General Plan.
- **Housing Element Policy 6.** The City of Huntington Park shall promote the development of new owner-occupied housing units to meet the housing demand for moderate and upper income households.



- **Housing Element Policy 7.** The City of Huntington Park shall continue to cooperate with other public agencies and NGOs as a means to promote the existing emergency and transitional housing in certain areas of the City.
- **Housing Element Policy 8.** The City of Huntington Park shall ensure that new residential projects are kept at a scale (number of units, height, etc.) compatible in design with adjacent residential areas.

## ISSUE AREA: IDENTIFICATION OF ADEQUATE SITES

- **Housing Element Policy 9.** The City of Huntington Park shall assist developers in the identification of land suitable for housing developments for medium- and lower-income families and individuals.
- **Housing Element Policy 10.** The City of Huntington Park shall explore opportunities for new residential development within residentially zoned areas.
- **Housing Element Policy 11.** The City of Huntington Park shall implement new land use designations, such as Mixed Use, for key areas of the City that could accommodate such development.

## ISSUE AREA: REMOVAL OF GOVERNMENTAL CONSTRAINTS

- **Housing Element Policy 12.** The City of Huntington Park shall continue to review and streamline administrative procedures for processing development permits and establish finite time limits for such approvals so as to minimize the time, costs, and uncertainty associated with development.
- **Housing Element Policy 13.** The City of Huntington Park shall periodically review and update development codes and standards to minimize their impact on new development.



- **Housing Element Policy 14.** The City of Huntington Park shall explore innovative strategies that will facilitate the planning and design review process while providing clear and consistent direction to housing developers and property owners.
- **Housing Element Policy 15.** The City of Huntington Park shall continue to cooperate with other public agencies and the adjacent cities in identifying strategies to promote and facilitate new housing construction.

## ISSUE AREA: EQUAL HOUSING

- **Housing Element Policy 16.** The City of Huntington Park shall ensure that all persons with special housing needs, such as the elderly and handicapped, have an adequate choice of suitable dwelling units.
- **Housing Element Policy 17.** The City of Huntington Park shall ensure adequate housing and high quality community services for all persons regardless of income, age, race, sex, marital status, or ethnic background.
- **Housing Element Policy 18.** The City of Huntington Park shall vigorously oppose those prejudices, practices, and market behaviors that result in housing discrimination.
- **Housing Element Policy 19.** The City of Huntington Park shall cooperate with other public agencies involved in the enforcement of laws aimed at promoting access to housing (fair housing laws) and non-discrimination.

## HOUSING PROGRAMS

Federal funds play a crucial role in implementing the Consolidated Plan. Local private and non-federal funds are usually insufficient to meet the heavy demand for housing and services in our community. Agencies receiving CDBG and HOME funds use those funds as a commitment to receiving other funding sources. Likewise, the City also leverages other resources among the formula grant programs. For example, the HOME program is matched by a variety of sources, including: private investment, public investment, and tax credits. The HOME Program requires a match of every



dollar drawn; however, the City remains exempt from meeting this mandate. Since its inception, the City of Huntington Park has received a 100% match reduction, and expects to receive such a reduction until otherwise indicated by HUD. Huntington Park's primary source of funds used to address the community's housing needs are HOME and Section 8. CDBG funds are directed almost entirely towards community development activities. Huntington Park's priority non-community development needs include unmet community facility, infrastructure, public service, economic development, and planning needs. Identified needs and priorities reflect the results of input from various City departments, as well as input from agency consultations and the citizen participation process.

## **PROGRAM #1 - HUNTINGTON PARK CODE ENFORCEMENT**

Under this program, the City will continue proactive enforcement of existing Municipal Code provisions relating to the appropriate use and development of properties throughout the City. The Code Enforcement Program is designed to bring properties up to City Code requirements and to clean up and improve unsightly or unsafe properties. Under this program, City Code Enforcement personnel will continue to refer property owners cited for Code violations to the housing rehabilitation assistance programs as a means to provide financial assistance to qualifying households.

The majority of the Code violations in the City were related to property maintenance and outdoor storage. No additional funding and/or staffing will be required or are anticipated with this program's continued implementation. The code enforcement efforts will be linked with the housing rehabilitation programs in that property owners of substandard units receiving code violation notices will also be informed of rehabilitation programs. Under this Housing Element, the program will be continued over the entire planning period applicable to this Housing Element update. This program's implementation strategy is summarized below:

- **Source of Funding.** General Fund and Community Development Block Grant (CDBG).
- **2014-2021 Program Objectives:** To maintain the existing service level.
- **Agency Responsible for Implementation.** Community Development Department.
- **Implementation Schedule.** The program is ongoing and will be continued.



## PROGRAM #2 - EMERGENCY SHELTER

Angeles Homeless Count for the Los Angeles County/City Continuum of Care (LA CoC) as part of the national effort required by HUD to enumerate the homeless population. For purposes of reporting homeless count data to HUD, all Continua of Care use a “literal homeless” definition: “Men, women, and children who are:

- Sleeping in places not meant for human habitation, including on the street, in parks, along rivers, in backyards, unconverted garages, cars and vans, along freeways or under overpasses, and the like; or
- Sleeping in emergency shelters, safe havens, or transitional housing programs and were homeless upon entry to the program.”

As required by SB-2, the City will provide for an Emergency Shelter Program that includes the identification of a geographic area where such facilities will be permitted by right. The City will continue to inform those special service agencies and organizations of the grants through mailing and brochures. The implementation strategy is summarized below:

- **Source of Funding.** General Fund.
- **2014-2021 Program Objectives:** To maintain the existing service level.
- **Agency Responsible for Implementation.** Community Development Department.
- **Implementation Schedule.** The program is ongoing and will be continued.



## PROGRAM #3 - EQUAL HOUSING

The City will continue to refer equal housing-related complaints to the Fair Housing Council of Los Angeles County which acts as an independent third-party to discrimination complaints. The City will make available literature on the Program at the Huntington Park City Hall, Chamber of Commerce, Library, City of Huntington Park website and other areas that the Community gathers information.

This program is currently in existence. Therefore, additional funding and/or staffing will not be required or are anticipated with this program's continued implementation. This program will be continued over the entire planning period applicable to this element. The City will continue to provide these services to Huntington Park residents and will advertise the availability of this program through brochures. Brochures describing the services of Fair Housing are available in the Community Development Department. Further marketing of the services available from Fair Housing will occur through informational pieces in the City-wide newsletter and through information provided on the City's official website. This program's implementation strategy is summarized below:

- **Source of Funding.** General Fund.
- **2014-2021 Program Objectives:** To maintain the existing service level.
- **Agency Responsible for Implementation.** Community Development Department.
- **Implementation Schedule.** The program is ongoing and will be continued.

## PROGRAM #4 - HOUSING REHABILITATION

The City will continue this program which is supported through the Community Development Block Program (CDBG). The City of Huntington Park provides qualified City homeowners assistance with their property maintenance through two Federally funded programs: The Housing Rehabilitation Program and the Handyworker Program. The Housing Rehabilitation Program provides grants to low- and moderate-income homeowners. The single-family residential homeowners who qualify can receive a maximum of \$15,000 for eligible improvements and mobile home owners may be granted a maximum of \$8,000. The City's Housing Rehabilitation Program offers homeowners the opportunity to make repairs and improvements. This program's implementation strategy is summarized below:



- **Source of Funding.** Community Development Block Grant (CDBG).
- **2014-2021 Program Objectives:** To maintain the existing service level.
- **Agency Responsible for Implementation.** Community Services Department.
- **Implementation Schedule.** The program is ongoing and will be continued.

## PROGRAM #5 - LAND USE AND ZONING CONFORMITY

The City of Huntington Park will continue to review the Zoning Ordinance to ensure that the development standards are consistent with those identified in the Land Use Element. The City will initiate appropriate changes to the Zoning Map to ensure conformity between the Land Use Element and Zoning Map. The City will also update its General Plan in coming months to ensure the land use designations conform to the State's density requirements.

No additional funding and/or staffing will be required or are anticipated with this program's continued implementation. Under this Housing Element, the program will be continued over the entire planning period. This program's implementation strategy is summarized below:

- **Source of Funding.** General Fund.
- **2014-2021 Program Objectives:** Not Applicable.
- **Agency Responsible for Implementation.** Community Development Department.
- **Implementation Schedule.** The City's Zoning Ordinance will undergo an annual review.



## PROGRAM #6 - REVIEW OF GOVERNMENTAL CONSTRAINTS AND THE ZONING ORDINANCE

This program is an existing program that will be continued through the 2013-2021 Planning Period. In 2012, the City reduced its plan check fees by 23%-58% plus its building permit fees by 23%. This program involves the comprehensive review of the City's Zoning Ordinance. The review will also include development standards related to building height, setbacks, and Density Bonus requirements for qualified affordable housing. The zoning requirements will be revised to ensure that it conforms to the Density Bonus requirements outlined in Government Code Section 65915. This section requires the City to undertake the following:

- The City must adopt an ordinance to implement the requirements of Section 65915 regarding Density Bonuses.
- The City must adopt a procedure to waive or modify development standards which preclude or interfere with the effect of the Density Bonus.
- The Zoning Ordinance revision will eliminate the definition of "family" as part of the current revision.
- The development standards for the residential zones will be reviewed to make sure they do not serve as a constraint to residential development.
- The Zoning Ordinance must be revised to address single room occupancy (SRO) housing and supportive housing.

This program's implementation strategy is summarized below:

- **Source of Funding.** General Fund.
- **2014-2021 Program Objectives:** To maintain the existing service level.
- **Agency Responsible for Implementation.** Community Development Department.
- **Implementation Schedule.** The review will be completed by the fourth quarter of 2015.



## PROGRAM #7 - TRANSITIONAL HOUSING

Transitional housing is a type of supportive housing used to facilitate the movement of homeless individuals and families to permanent housing. A person may live in a transitional housing unit for up to two years while receiving supportive services that enable independent living. The City will continue to permit the existing Huntington Park Shelter, which includes a transitional housing facility, to operate.

The City intends to comply with State law regarding the provision of transitional housing. The existing Huntington Park Salvation Army Shelter located in the City includes a transitional housing facility. The following will be applicable to transitional housing:

- Transitional housing will be subject to the same permitting procedures as that required for other permitted uses for the zone without undue special regulatory requirements.
- The residential zones are in close proximity to transportation service providers, schools, parks, and other public services and facilities.
- Parking requirements, fire regulations, and design standards for transitional housing will be the same as that required for the corresponding residential zone districts. As a result, the applicable development standards will not impede the efficient use of the site as transitional housing.

The implementation strategy is summarized below:

- **Source of Funding.** General Fund (for the rezoning).
- **2014-2021 Program Objectives:** To maintain the existing service level.
- **Agency Responsible for Implementation.** Community Development Department.
- **Implementation Schedule.** The review will be completed by the fourth quarter of 2015.



## PROGRAM #8 - ACCESSORY (SECOND) UNIT ORDINANCE

This new Second Unit Ordinance permits the construction of second units pursuant to the City's Zoning Code as required in Section 65852.2 of the State of California Government Code. The current Zoning Ordinance provides for a "guest house or accessory use." However, the City's Zoning Ordinance will need to be updated to conform to current State requirements. This program provides for the preparation, adoption, and subsequent implementation of a new Second Unit Ordinance that is required under State law. The Ordinance will enable owners of single-family properties to construct accessory units. The Ordinance will also enable the City to establish development standards for such units.

The implementation of this program will begin with the preparation and review of the new Second Unit Ordinance that will be included in the City's Zoning Ordinance. Once the ordinance meets all pertinent State and local requirements, it will be adopted by the City Council. Finally, the Second Unit Ordinance will be advertised on the City's website and printed handouts will be prepared and provided at the Planning Department counter. This program's implementation strategy is summarized below:

- **Source of Funding.** General Fund (for the rezoning).
- **2014-2021 Program Objectives:** The City will revise its Zoning Ordinance consistent with State law.
- **Agency Responsible for Implementation.** Community Development Department.
- **Implementation Schedule.** The City's Zoning Ordinance will be amended by the end of 2014 to provide for the Second Unit Ordinance.



## PROGRAM #9 - DENSITY BONUS

The City is required under State law to have adopted density bonus regulations in its Zoning Ordinance. This new program provides for the incorporation of density bonuses and other incentives in the City's Zoning Ordinance to developers who construct projects with qualifying percentages of affordable housing units. The City has adopted a "Density Bonus Ordinance (Section 9-3.203 [Allowable Bonuses]) that contains the following elements:

"The following list outlines the development bonuses that may be allowed by the Commission, based on the number and extent of amenities, public facilities, and other positive development characteristics, outlined above and/or by the Commission, that are included in a project.

1. Increased allowable floor area ratio (FAR);
2. Increased building height;
3. Reduced building setback requirements;
4. Increased lot coverage percentage;
5. Reduced parking requirements;
6. Increased density;
7. Reduction of fees; and
8. Other development bonuses as determined by the Commission.

The amount of development bonus shall be determined by the Planning Commission in accordance with reasonable standards or criteria such as by Community Development Department or City policy, ordinance, or a special nexus or fiscal impact study as part of the project application."

As indicated previously, the Density Bonus Law (found in California Government Code Sections 65915—65918), is a State mandate. A developer who meets the requirements of the State law is entitled to receive the density bonus and other benefits. In addition to the density bonus, the City is also required to provide one or more "incentives"



or “concessions” to each project which qualifies for the density bonus. Cities and counties are required to grant a Density Bonus and other incentives or concessions to housing projects that contain one of the following:

- At least 5% of the housing units are restricted to very low-income residents;
- At least 10% of the housing units are restricted to lower income residents;
- At least 10% of the housing units in a for-sale common interest development are restricted to moderate-income residents;
- The project donates at least one acre of land to the City or County for very low-income units, and the land has the appropriate general plan designation, zoning permits and approvals, and access to public facilities needed for such housing;
- The project is a senior citizen housing development (no affordable units required); and,
- The project is a mobile-home park age-restricted to senior citizens (no affordable units required).

The amount of the Density Bonus is set on a sliding scale, based upon the percentage of affordable units at certain prescribed income levels. In addition to the Density Bonus, the City is also required to provide one or more ‘incentives’ or “concessions” to each project which qualifies for the Density Bonus (except that market rate senior citizen projects with no affordable units, and land donated for very low-income housing, do not appear to be entitled to incentives or concessions). A concession or incentive is defined as:

- A reduction in site development standards or a modification of zoning code or architectural design requirements, such as a reduction in setback or minimum square footage requirements;
- Approval of mixed use zoning; or
- Other regulatory incentives or concessions which actually result in identifiable and financially sufficient cost reductions.



The number of required incentives or concessions is based on the percentage of affordable units in the project:

- For projects with at least 5% very low-income, 10% lower income or 10% moderate-income units, one incentive or concession is required;
- For projects with at least 10% very low-income, 20% lower income or 20% moderate-income units, two incentives or concessions are required; and,
- For projects with at least 15% very low-income, 30% lower income or 30% moderate-income units, three incentives or concessions are required.

The City is required to grant the concession or incentive proposed by the developer unless it finds that the proposed concession or incentive is not required in order to achieve the required affordable housing costs or rents, or would cause a public health or safety problem, cause an environmental problem, harm historical property, or would be contrary to law. Financial incentives, fee waivers and reductions in dedication requirements may be, but are not required to be, provided by the City.

The City's existing Density Bonus does include provisions related to the granting of Density Bonuses for affordable housing (refer to Subsection 13, Affordable housing; (Also see Subsection 9-4.103.E). The City will then promote the program by providing brochures describing the program and its benefits, and making them available at the counter and information desk in City Hall. Promotion of this program will be accomplished by verbally communicating information regarding housing bonuses to housing developers as they are assisted by the Planning Department at the public counter or over the telephone. Under this Housing Element, the program will be continued over the entire planning period applicable to this Housing Element update. This program's implementation strategy is summarized below:

- **Source of Funding.** General Fund (for the rezoning).
- **2014-2021 Program Objectives:** The City will advertise this program through handout materials and communication with developers.
- **Agency Responsible for Implementation.** Community Development Department.
- **Implementation Schedule.** The program is a new program. The new Affordable Housing Density Bonus Ordinance will be adopted by the end of 2014. The brochure materials and handouts will be provided by the end of the second quarter of 2015.



## **PROGRAM #10 - REASONABLE ACCOMMODATION HOUSING**

The State now requires all cities to maintain a “reasonable accommodation ordinance” to ensure that a city’s zoning and development requirements do not hinder the implementation of housing improvements that aid disabled persons. These improvements may include ramps, wider doorways, hand rails, etc. The City of Huntington Park does not have any such constraints though this commitment needs to be established through an amendment to the Zoning Ordinance that addresses reasonable accommodation. This program is a new program that will be implemented during the 2013 through 2021 planning period. Not all of the disability categories require physical alterations to the housing unit to better accommodate the disabled resident. However, many residents will benefit from specific improvements that would better accommodate a disabled person.

The City of Huntington Park has adopted a “Reasonable Accommodation Ordinance” that is included in Section 9-3.1901 in the City of Huntington Park Municipal Code. The stated purpose is to provide individuals with disabilities reasonable accommodation in regulations and procedures to ensure equal access to housing, and to facilitate the development of housing. The purpose of this section is to provide a procedure under which a disabled person may request a reasonable accommodation in the application of zoning requirements. Under this program, the City will continue to review the Ordinance to ensure it meets current State requirements. The review related to the implementation of the Ordinance will be ministerial in nature with minimal or no processing fee. Improvements may be approved by the Community Development Director as long as a number of findings may be made. First, the request for reasonable accommodation must be used by an individual with a disability protected under fair housing laws. Second, the requested accommodation is necessary to make housing available to an individual with a disability protected under fair housing laws. Third, the requested accommodation would not impose an undue financial or administrative burden on the City. Finally, the requested accommodation would not require a fundamental alteration in the nature of the City’s General Plan and Zoning Ordinance.



- **Source of Funding.** General Fund (for the rezoning).
- **2014-2021 Program Objectives:** Facilitate the development, maintenance and improvement of housing for persons with disabilities; reduce processing time for reasonable accommodation requests by 50 percent.
- **Agency Responsible for Implementation.** Community Development Department.
- **Implementation Schedule.** The Zoning Ordinance revision will be completed by the second quarter of 2014.

## PROGRAM #11 - ENERGY CONSERVATION

Under this program, the City will review the City's Zoning Ordinance and subdivision requirements, as well as other applicable codes, to promote energy conservation in housing rehabilitation and in the construction of new housing. This program will supplement existing City efforts in the enforcement of the State's construction codes requiring energy efficiency in new construction. The City of Huntington Park will adopt a "Green City" ordinance in conformance to current State requirements. This program will ensure that developers and/or architects incorporate certain State-mandated energy and water conserving equipment in any new development. The City's website will be expanded to include a "Green City" section that will refer users to a wide range of initiatives from other energy and water providers that will be effective in helping to conserve these resources. The programs will include rebates from other energy providers for energy conserving refrigerators, water heaters, and other household appliances. The key elements of this program include the following:

- The City will encourage and support cost-effective energy technologies (passive solar space heating and cooling and water conservation) in the review of new residential development. The City shall permit the installation of photovoltaic/solar and solar water heating systems on new residential construction.
- The City will establish an information kiosk in Civic Center near the planning counter that will include brochures and handouts promoting energy conservation from local utility providers. In addition, the City's website will be updated to publicize the availability of the various rebate programs and tax incentives that will reduce the cost of installing energy-saving devices.



- City of Huntington Park will update the Zoning Ordinance and subdivision requirements and other applicable codes to promote energy conservation in housing rehabilitation and in the construction of new housing.
- The City shall support ongoing programs from SCE and Sempra Energy that promote energy conservation. The programs sponsored by the utility providers include rebates for energy conserving refrigerators, water heaters, and other household appliances.
- The City will review the Zoning Ordinance to ensure that there are no requirements that are overly restrictive concerning the installation of solar panels. The City will then amend the Zoning Ordinance to ensure that solar panels are permitted in all Zone Districts.
- Title 24 of the California Building Code requires phasing out older, less energy efficient toilets by replacing them with toilets that use only 1.6 gallons per flush. The City will continue to ensure that this requirement is being implemented.
- The City shall promote water conservation (drought-tolerant landscaping, water conserving plumbing fixtures, etc.) in the review of new development.

No additional funding and/or staffing will be required or are anticipated with this program's continued implementation. Under this Housing Element, the program will be continued over the entire planning period. This program's implementation strategy is summarized below:

- **Source of Funding.** General Fund.
- **2014-2021 Program Objectives:** The City will revise its ordinance consistent with State law and advertise it through handout materials available at the public counter through the City's web page and through periodic advertisements in the City newsletter.
- **Agency Responsible for Implementation.** Community Development Department.
- **Implementation Schedule.** The program is ongoing and will be continued.



## PROGRAM #12 - SINGLE ROOM OCCUPANCY HOUSING

The State requires all cities to update their zoning ordinances to provide for SRO housing. A single-room occupancy (SRO) development may serve as an important source of affordable housing for lower-income individuals, seniors, and persons with disabilities. A SRO unit usually is small ranging in size from 200 square feet to 350 square feet. Many of the older SROs have been lost due to deterioration, hotel conversions, and demolition.

The City has adopted a SRO Ordinance (Title 9, Chapter 3, Article 13 [Single Room Occupancy Facilities]). The purpose of this Article is to provide location, development, and operational standards for SRO facilities. The key elements of the SRO Ordinance include the following:

“Single room occupancy (SRO) facilities, allowable only in the SRO Overlay District and within specified Districts in the Huntington Park Downtown Specific Plan (DTSP) subject to the approval of a Conditional Use Permit, shall be located/developed/operated in the following manner:

- The parcel upon which the single room occupancy facility is to be established shall conform to all standards of the R-H and the Huntington Park Downtown Specific Plan (DTSP) zoning districts, as applicable.
- SROs shall not be located within 250 feet of a parcel which has a school for children, adult bookstore or theater, bar or liquor store; and existing motels, hotels or apartments shall not be permitted to convert to SROs.
- SROs shall be located within one-quarter mile of a bus stop or transit station.
- SROs shall not exceed a maximum density of seventy (70) units per gross acre in the DTSP or 400 units per gross acre in the SRO Overlay District.
- Off-street parking shall be provided in compliance with Article 8 of this Chapter (Off-Street Parking Standards). Secured bicycle or motorcycle spaces shall be provided at a minimum ratio of one space for each ten (10) tenants. A permanent, continuously available temporary parking/loading area shall be provided adjacent to the main entrance.



- The design of a SRO project shall coordinate with and complement the existing architectural style and standards of the surrounding land uses. If a design theme has been established in the proposed area, the theme should be reflected in the design and scale of the SRO project;
- Exterior common areas and/or open courtyards should be provided throughout the project. These areas should be designed to provide passive open space with tables, chairs, planters or small garden spaces to make these areas useful and functional for the tenants. Exterior common areas, including parking areas, shall be illuminated with a minimum of two (2) footcandles by low pressure sodium lighting from dusk to dawn. The exterior lighting shall be stationary and directed away from adjacent properties and public rights-of-way."

This program will involve the updating of the SRO Ordinance as required during this planning period. The implementation elements are outlined below:

- **Source of Funding.** General Fund (for the rezoning).
- **2014-2021 Program Objectives:** The City will amend the Zoning Ordinance as required by State law.
- **Agency Responsible for Implementation.** Community Development Department.
- **Implementation Schedule.** Within 12 months of Housing Element Adoption.

## PROGRAM #13 - SUPPORTIVE HOUSING

The State requires all cities to update their zoning ordinances to provide for supportive housing. Supportive housing refers to permanent rental housing that also provides a wide array of support services that are designed to enable residents to maintain stable housing and lead more productive lives. Supportive housing is most often targeted to persons that have greater risk factors such as mental illness or drug dependence that could ultimately lead to prolonged homelessness. The types of support services that may be provided include medical and mental health care, vocational and employment training, substance abuse counseling, childcare, and independent living skills training. Most supportive housing is constructed and managed by non-profit housing developers in partnership with non-profit service providers. However, the State requires that local governments take a proactive role in facilitating the review and



approval process. As a result, the City will be required to amend its Zoning Ordinance to permit such housing in its residential zone districts. Such housing is already located in the City though this program will enable the Huntington Park Planning Department and other City agencies to better track and monitor such uses.

The State requires this Housing Element to identify zones that allow supportive housing development and demonstrate that zoning, local regulations (standards and the permit process) encourage and facilitate supportive housing. Supportive housing may include a single family detached unit or an apartment building. The City of Huntington Park will permit supportive housing within all of the residential Zone districts. The City will comply with all State requirements governing supportive housing. The implementation strategy is summarized below:

- **Source of Funding.** General Fund (for the rezoning).
- **2014-2021 Program Objectives:** The City will amend the Zoning Ordinance as required by State law.
- **Agency Responsible for Implementation.** Community Development Department.
- **Implementation Schedule.** Within 12 months of Housing Element Adoption.

## REGIONAL HOUSING NEEDS ASSESSMENT

This section of the City of Huntington Park Housing Element compares the housing need projections developed by the Southern California Association of Governments (SCAG) as part of the Regional Housing Needs Assessment (RHNA), with historic population, housing, and employment growth in the City. The projections were derived from population, housing, and employment figures developed by SCAG as part of the earlier planning process undertaken to develop the RHNA. The authority to determine housing needs for the various income groups for cities within the region has been delegated to the Southern California Association of Governments (SCAG), pursuant to Section 65584 of the Government Code. The housing needs are categorized according to income groups. The income categories include *Very low*, *Low*, *Moderate*, and *Above moderate-income* households, and the incomes of the selected income groups are based upon percentages of the median household income for the larger Los Angeles County region. The RHNA housing need for Huntington Park is categorized according to the following income groups:



- The **Very-Low-income** households are those households whose income does not exceed 50% of the median household income for the greater Los Angeles area. The City's RHNA for this category is 216 units.
- The **Low-income** households earn from 51% to 80% of the median. The City's RHNA for this category is 128 households.
- The **Moderate-income** groups earn from 81% to 120% of the median and the City's RHNA for this category is 149 households.
- The **Above-Moderate** households earn over 120% of the median income and the City's RHNA for this category is 402 households.

The total projected construction need for Huntington Park during the 2014 to 2021 planning period is 895 units. Table 6-24 illustrate the distribution of the projected housing needs for the four income categories.

**Table 6-24: RHNA Allocation for Huntington Park 2014-2021**

Income Level	RHNA	%
Very Low-income	216	24.1%
Low-income	128	14.7%
Moderate-income	149	16.7%
Above Moderate-income	402	44.5%
Total	895	100.0%
Source: SCAG RHNA. 2016		

The HCD indicates that the projected need for extremely low-income households may be calculated by assuming that such households represent 50% of the very low-income households. In other words, the future house need for extremely low-income households in Huntington Park is projected to be 5 units. The State Legislature also requires local governments to consider the projected needs for extremely low-income households. As indicated previously, those households that have incomes of 30% of



the County median would fall into this category. Based on a 2010 Los Angeles County median income (\$61,632), an extremely low-income household would have a median annual income of \$18,490 or less.

## LAND AVAILABLE TO ACCOMMODATE RHNA HOUSING NEED

The City of Huntington Park is fully developed and, as a result, any new residential development will consist of infill development within properties that are currently vacant or underutilized. New residential development may also occur within residentially zoned properties where the existing land uses are non-residential at the present time. The Land Use Element contains two residential land use categories and a single category each for commercial, industrial, open space, and institutional.

- **Residential, Low-Density.** This land use designation contemplates lower density residential development, including single-family homes, within those properties that are so designated. The maximum development density is 8.71 dwelling units per acre. (One unit per parcel is permitted with a minimum lot size of 5,000 square feet.) This designation is limited to properties improved with existing single-family (detached) dwelling units.
- **Residential, Medium-Density.** This land use designation permits higher density residential development that includes multiple-family development (town homes, condominiums, and apartments). The maximum development density is 21.78 units per acre. The corresponding zone districts include R-1, R-2, R-3, and C-3R zones.

The primary infill housing strategy focuses on the identification of a specific area of the City that could be developed in residential uses. Three available sites were identified as potential candidates that would enable the City to accommodate its RHNA allocation.



## QUANTIFIED OBJECTIVES

**Table 6-25** indicates the department responsible for overseeing the administration and/or implementation of the aforementioned programs. **Table 3-4** also indicates the funding source for the program, the schedule for the program's implementation, and finally, where appropriate, the number of units that will be assisted through the implementation of the housing program.

**Table 6-25: 5-Year Housing Program Implementation Matrix, 2019-2024**

Program Name	Responsible Agency	Funding Source	Implementation Schedule	Quantified Objective
Huntington Park Code Enforcement Program	Community Development Department.	General Fund and Community Development Block Grants.	This program is ongoing and will be continued.	To maintain the current level of service.
Emergency Shelter Program	Community Development Department.	General Fund.	This program is ongoing and will be continued.	To continue with the existing shelter facility.
Equal Housing Program	Community Development Department.	General Fund.	This program is ongoing and will be continued.	To maintain the current level of service.
Housing Rehabilitation Program	Community Services Department	Community Development Block Grant.	This program is ongoing and will be continued.	To maintain the current level of service.
Handy-Worker Program	Community Services Department	Community Development Block Grant.	This program is ongoing and will be continued.	To maintain the current level of service.
Land Use and Zoning Conformity Program	Community Development Department.	General Fund.	This program is ongoing and will be continued.	To maintain the current level of service.
Review of Governmental Constraints and the Zoning Ordinance	Community Development Department.	General Fund.	This program is ongoing and will be continued.	To maintain the current level of service.

**Table 6-25: 5-Year Housing Program Implementation Matrix, 2019-2024 (continued)**

Program Name	Responsible Agency	Funding Source	Implementation Schedule	Quantified Objective
Transitional Housing Program	Community Development Department.	General Fund.	This program is ongoing and will be continued.	To maintain the current level of service.
Accessory (Second) Unit Ordinance Program	Community Development Department.	General Fund.	Will be amended by the end of 2017.	The City will revise its Zoning Ordinance.
Density Bonus Program	Community Development Department.	General Fund.	Has already been adopted.	The City will advertise through handout materials.
Reasonable Accommodation Housing Program	Community Development Department.	General Fund.	Has already been adopted.	To reduce processing time for reasonable accommodation requests by 50%.
Energy Conservation Program	Community Development Department.	General Fund.	To be continued during the planning period.	To revise ordinance consistent with State Law. Programs will be advertised on the City's webpage and newsletter.
Single Room Occupancy Housing Program	Community Development Department.	General Fund.	Has already been adopted.	Comply with applicable State requirements.
Supportive Housing Program	Community Development Department.	Community Development Block Grant.	Not Applicable.	To implement this program as required by State law.
Source: City of Huntington Park, 2019.				

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## **Appendix J: 2020 Consumer Confidence Report (Water Quality Report)**

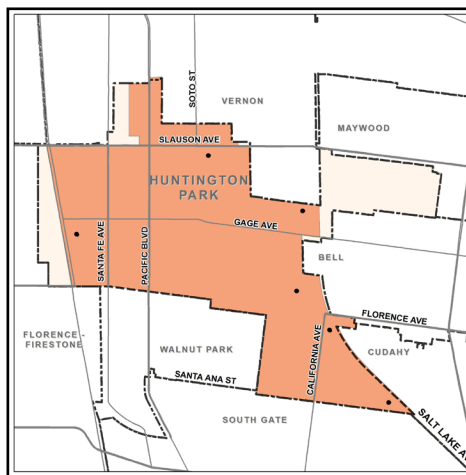
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**City of Huntington Park 2020 Urban Water Management Plan**

# CITY OF HUNTINGTON PARK

## 2020 CONSUMER CONFIDENCE REPORT

Since 1991, California water utilities have been providing information on water served to its consumers. This report is a snapshot of the tap water quality that we provided last year. Included are details about where your water comes from, how it is tested, what is in it, and how it compares with state and federal limits. We strive to keep you informed about the quality of your water, and to provide a reliable and economic supply that meets all regulatory requirements.



### **Where Does My Tap Water Come From?**

Your tap water comes from 2 sources: groundwater and surface water. We pump groundwater from local, deep wells. We also use Metropolitan

Water District of Southern California's (MWD) surface water from both the Colorado River and the State Water Project in northern California. These water sources, located on the adjacent map, supply our service area. The quality of our groundwater and MWD's surface water supplies is presented in this report.

### **How is My Drinking Water Tested?**

Your drinking water is tested regularly for unsafe levels of chemicals, radioactivity and bacteria at the source and in the distribution system. We test weekly, monthly, quarterly, annually or less often depending on the substance. State and federal laws allow us to test some substances less than once per year because their levels do not change frequently. All water quality tests are conducted by specially trained technicians in state-certified laboratories.

### **What Are Drinking Water Standards?**

The U.S Environmental Protection Agency (USEPA) limits the amount of certain substances allowed in tap water. In California, the State Water Resources Control Board (State Water Board) regulates tap water quality by enforcing limits that are at least as stringent as the Federal EPA's. Historically, California limits are more stringent than the Federal ones.

There are two types of these limits, known as standards. Primary standards protect you from substances that could potentially affect your health. Secondary standards regulate substances that affect the aesthetic qualities of water. Regulations set a Maximum Contaminant Level (MCL) for each of the primary and secondary standards. The MCL is the

highest level of a substance that is allowed in your drinking water.

Public Health Goals (PHGs) are set by the California Environmental Protection Agency. PHGs provide more information on the quality of drinking water to customers, and are similar to their federal counterparts, Maximum Contaminant Level Goals (MCLGs). PHGs and MCLGs are advisory levels that are nonenforceable. Both PHGs and MCLGs are concentrations of a substance below which there are no known or expected health risks.

### **How Do I Read the Water Quality Table?**

Although we test for over 100 substances, regulations require us to report only those found in your water. The first column of the water quality table lists substances detected in your water. The next columns list the average concentration and range of concentrations found in your drinking water. Following are columns that list the MCL and PHG or MCLG, if appropriate. The last column describes the likely sources of these substances in drinking water.

To review the quality of your drinking water, compare the highest concentration and the MCL. Check for substances greater than the MCL. Exceedence of a primary MCL does not usually constitute an immediate health threat. Rather, it requires testing the source water more frequently for a short duration. If test results show that the water continues to exceed the MCL, the water must be treated to remove the substance, or the source must be removed from service.

### **Why Do I See So Much Coverage in the News About the Quality Of Tap Water?**

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- Microbial contaminants, including viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife;
- Inorganic contaminants, such as salts and metals, that can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming;
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses;
- Organic chemical contaminants, including synthetic and volatile organic chemicals, that are byproducts of industrial processes and petroleum production, and can

also come from gas stations, urban stormwater runoff, agricultural application, and septic systems;

- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the USEPA and the State Water Resources Control Board (State Board) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The State Board regulations also establish limits for contaminants in bottled water that must provide the same protection for public health.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline (1-800-426-4791). You can also get more information on tap water by logging on to these helpful web sites:

- <http://www.epa.gov/dwstandardsregulations/2018-drinking-water-standards-and-advisory-tables> (USEPA's web site)
- [https://www.waterboards.ca.gov/drinking\\_water/certlic/drinkingwater/Chemicalcontaminants.html](https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/Chemicalcontaminants.html) (State Board web site)

If present, elevated levels of lead can cause serious health problem, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with services lines and home plumbing. The City of Huntington Park is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/lead>.

### **Should I Take Additional Precautions?**

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The USEPA/Centers for Disease Control guidelines on appropriate means to lessen the risk of infection of *Cryptosporidium* and other microbial contaminants are available from the USEPA's Safe Drinking Water Hotline (1-800-426-4791).

### **Source Water Assessment**

MWD completed an assessment of its Colorado River and State Water Project supplies in 2002. Colorado River supplies are considered most vulnerable to recreation, urban/storm

water runoff, increasing urbanization in the watershed, and wastewater. State Water Project supplies are considered most vulnerable to urban/storm water runoff, wildlife, agriculture, recreation and wastewater. A copy of the assessment can be obtained by contacting MWD at (213) 217-6850.

The City of Huntington Park conducted an assessment of its groundwater supplies in 2004. Groundwater supplies are considered most vulnerable to sewer collection systems, automobile gas stations, and contractor or government agency equipment storage yards. Customers may request a copy of the Source Water Assessment by mailing request to the City of Huntington Park: 6550 Miles Avenue, Huntington Park, CA 90255

### **How Can I Participate in Decisions On Water Issues That Affect Me?**

The public is welcome to attend City Council meetings the first and third Tuesday of each month at 6:00 p.m. at 6550 Miles Avenue, Huntington Park, CA 90255.

### **How Do I Contact My Water Agency If I Have Any Questions About Water Quality?**

If you have specific questions about your tap water quality, please contact Mr. Cesar Roldan, Director of Public Works at (323) 584-6274 or [croldan@hpca.gov](mailto:croldan@hpca.gov).

### **Some Helpful Water Conservation Tips**

- Fix leaky faucets in your home – save up to 20 gallons every day for every leak stopped
- Save between 15 and 50 gallons each time by only washing full loads of laundry
- Adjust your sprinklers so that water lands on your lawn/garden, not the sidewalk/driveway – save 500 gallons per month
- Use organic mulch around plants to reduce evaporation – save hundreds of gallons a year
- Visit <http://www.epa.gov/watersense> for more information.

**Visit us on the web at: [www.hpca.gov](http://www.hpca.gov)**

# CITY OF HUNTINGTON PARK

## 2020 CONSUMER CONFIDENCE REPORT

Results are from the most recent testing performed in accordance with state and federal drinking water regulations

The State allows monitoring for some contaminants less than once per year because the concentrations of these contaminants do not change frequently.

Some of the data, though representative, are more than one year old.

PRIMARY STANDARDS MONITORED AT THE SOURCE-MANDATED FOR PUBLIC HEALTH						
ORGANIC CHEMICALS (µg/l)	GROUNDWATER		MWD'S SURFACE WATER		PRIMARY	MCLG or PHG
	AVERAGE	RANGE	AVERAGE	RANGE	MCL	
	(k)	(k)	(k)	(k)		
MAJOR SOURCES IN DRINKING WATER						
INORGANICS						
Sampled from 2018 to 2020 (b)						
Aluminum (mg/l)	ND	ND	0.14	ND - 0.26	1	0.6 (a)
Arsenic (µg/l)	0.7	ND - 2.8	ND	ND	10	0.004 (a)
Barium (mg/l)	0.1	ND - 0.14	0.11	0.11	1	2 (a)
Fluoride (mg/l) (c)	0.38	0.3 - 0.4	0.70	0.5 - 0.9	2.0	1 (a)
Nitrate (mg/l as N)	0.60	ND - 0.9	ND	ND	10	10
Erosion of natural deposits; residue from surface water treatment processes						
Erosion of natural deposits; glass/electronics production wastes; runoff						
Oil drilling waste and metal refinery discharge; erosion of natural deposits						
Erosion of natural deposits, water additive that promotes strong teeth, discharge from fertilizer and aluminum factories.						
Runoff and leaching from fertilizer use; leaching from septic tanks and sewage, erosion of natural deposits.						
RADIOLOGICAL - (pCi/l) (Sampled in 2019-2020) (b)						
Gross Beta	NA	NA	2.0	ND - 7.0	50	0
Radium 228	0.3	ND - 1.2	ND	ND - 2.0		0.019
Uranium	1.7	ND - 3.0	2	1.0 - 3.0	20	0.43 (a)
Decay of natural and man-made deposits						
Erosion of natural deposits						
Erosion of natural deposits						

PRIMARY STANDARDS MONITORED IN THE DISTRIBUTION SYSTEM - MANDATED FOR PUBLIC HEALTH						
MICROBIALS	DISTRIBUTION SYSTEM			PRIMARY	MCLG or PHG	
	AVERAGE # POSITIVE	RANGE OF # POSITIVE		MCL		
	0	0		>1 positive	0	Naturally present in the environment.
Total Coliform Bacteria	0					
Fecal Coliform and <i>E.Coli</i> Bacteria	0			0	0	Human and animal fecal waste
No. of Acute Violations	0			-	-	
DISTRIBUTION SYSTEM						
AVERAGE						
0.3						
<0.1 - 5.6						
TT						
Soil runoff						
DISINFECTION BY-PRODUCTS (e)						
AND DISINFECTION RESIDUALS	DISTRIBUTION SYSTEM		PRIMARY		MCLG or PHG	
	HIGHEST RUNNING AVERAGE	RANGE	MCL			
Trihalomethanes-TTHMS (µg/l)	37.4	14.0 - 32.1	80		-	By-product of drinking water disinfection.
Haloacetic Acids (µg/l)	8.4	4.3 - 10.1	60		-	By-product of drinking water disinfection.
Total Chlorine Residual (mg/l)	1.7	0.64 - 2.20	4.0 (f)		4.0 (g)	Drinking water disinfectant added for treatment
AT THE TAP						
PHYSICAL CONSTITUENTS 30 sites sampled in 2019	DISTRIBUTION SYSTEM			ACTION LEVEL		MCLG or PHG
	90th PERCENTILE	NUMBER OF SITES ABOVE THE AL		AL		
Copper (mg/l)	0.11 (h)		0	1.3 AL	0.3 (a)	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (µg/l)	0 (h)		0	15 AL	0.2 (a)	Internal corrosion of household water plumbing systems, discharges from industrial manufacturers; erosion of natural deposits

SECONDARY STANDARDS MONITORED AT THE SOURCE-FOR AESTHETIC PURPOSES

Sampled from 2018 to 2020 (b)	GROUNDWATER		MWD'S SURFACE WATER		SECONDARY	MCLG
	AVERAGE	RANGE	AVERAGE	RANGE	MCL	or PHG
Aggressiveness Index (corrosivity)	12.4	12.2 - 12.4	12.4	12.3 - 12.4	Non-corrosive	-
Aluminum (µg/l) (i)	ND	ND	143	ND - 260	200	600 (a)
Chloride (mg/l)	41.8	34 - 47	93.5	93 - 94	500	-
Color (color units)	ND	ND	1.9	1.0	15	-
Specific Conductance (µS/cm)	620	570 - 650	968	963 - 975	1,600	-
Iron (ug/l)	10	ND - 110	ND	ND	300	-
Manganese (µg/l)	45.2	39 - 48	ND	ND	50	-
Odor (threshold odor number)	1.3	1.0 - 2.0	2	2.0	3	-
Sulfate (mg/l)	93.5	81 - 100	214.5	211 - 217	500	-
Total Dissolved Solids (mg/l)	367.5	330 - 380	591	582 - 603	1,000	-
Turbidity (NTU)	0.1	ND - 0.4	ND	ND	5	-
Soil runoff						

SECONDARY STANDARDS MONITORED IN THE DISTRIBUTION SYSTEM-FOR AESTHETIC PURPOSES

GENERAL	DISTRIBUTION SYSTEM		SECONDARY	MCLG
	AVERAGE	RANGE	MCL	or PHG
PHYSICAL CONSTITUENTS				
Color (color units)	<3.0	<3 - 15	15	-
Odor (threshold odor number)	1	1.0 - 2.0	3	-

ADDITIONAL CHEMICALS OF INTEREST

Sampled from 2018 to 2020 (b)	GROUNDWATER		MWD'S SURFACE WATER	
	AVERAGE	RANGE	AVERAGE	RANGE
Alkalinity (mg/l)	180	170 - 190	118	117 - 120
Boron (µg/l)	NA	NA	130	130.0
Calcium (mg/l)	63.3	59 - 67	65.5	65 - 67
1,4-Dioxane (ug/l) (j)	2.4	2.0 - 2.6	NA	NA
Magnesium (mg/l)	13.8	13 - 15	26	25 - 26
N-Nitrosodimethylamine (ng/l)	NA	NA	1.6	ND - 3.1
pH (standard unit)	7.9	7.8 - 7.9	8.1	8.1
Potassium (mg/l)	3.3	2.9 - 3.6	4.6	4.5 - 4.7
Sodium (mg/l)	44	43 - 45	95.5	93 - 98
Total Hardness (mg/l)	215	200 - 230	265.5	256 - 269
Total Organic Carbon (mg/l)	NA	NA	2.4	2.1 - 2.7

FOOTNOTES

- (a) California Public Health Goal (PHG). Other advisory levels listed in this column are federal Maximum Contaminant Level Goals (MCLGs).
- (b) Indicates dates sampled for groundwater sources only.
- (c) Starting June 1, 2015, the fluoride levels at the treatment plants were adjusted to achieve an optimal fluoride level of 0.7 ppm and a control range of 0.6 ppm to 1.2 ppm to comply with the existing State's Water Fluoridation Standards. Metropolitan (MWD) was in compliance with all provisions of the State's Fluoridation System Requirements.
- (d) Combined Radium 226 + Radium 228 has a Maximum Contaminant Level (MCL) of 5 pCi/L.
- (e) Running annual average used to calculate average, range, and MCL compliance.
- (f) Maximum Residual Disinfectant Level (MRDL)
- (g) Maximum Residual Disinfectant Level Goal (MRDLG)
- (h) 90th percentile from the most recent sampling at selected customer taps.
- (i) Aluminum has primary and secondary standards.
- (j) The Notification Level of 1 ug/l for 1,4-Dioxane was exceeded in one well in 2020. Some people who use water containing 1,4-dioxane in excess of the Notification Level over many years may experience liver or kidney problems and may have an increased risk of getting cancer, based on studies in laboratory animals.
- (k) Over 50 regulated and unregulated organic chemicals were analyzed. None were detected at or above the reporting limit in groundwater or surface water sources.

ABBREVIATIONS

< = less than	SI = saturation index	pCi/l = picoCuries per liter	mg/l = milligrams per liter or parts per million (equivalent to 1 drop in 42 gallons)
NA = constituent not analyzed		NTU = nephelometric turbidity units	µg/l = micrograms per liter or parts per billion (equivalent to 1 drop in 42,000 gallons)
uS/cm = microSiemens per centimeter		ND = constituent not detectable at testing limit	ng/l = nanograms per liter or parts per trillion (equivalent to 1 drop in 42,000,000 gallons)

DEFINITIONS

**Maximum Contaminant Level (MCL):** The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

**Maximum Contaminant Level Goal (MCLG):** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. Environmental Protection Agency.

**Maximum Residual Disinfectant Level (MRDL):** The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

**Maximum Residual Disinfectant Level Goal (MRDLG):** The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectant to control microbial contaminants.

**Public Health Goal (PHG):** The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.

**Treatment Technique (TT):** A required process intended to reduce the level of a contaminant in drinking water.

**Regulatory Action Level (AL):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

**Primary Drinking Water Standards (PDWS):** MCLs, MRDLs and treatment techniques (TTs) for contaminants that affect health, along with their monitoring and reporting requirements.

**Secondary Drinking Water Standards (SDWS):** MCLs and MRDLs for contaminants that affect the aesthetic qualities (taste, odor, or appearance) of drinking water. Contaminants with SDWSs do not affect the health at the MCL levels.

**Variances & Exemptions :** Department permission to exceed an MCL or not comply with a treatment technique under certain conditions.

UNREGULATED CONTAMINANT MONITORING REGULATION (UCMR-4)				
<p>The Safe Drinking Water Act requires the Environmental Protection Agency (EPA) to identify unregulated contaminants for potential regulations. Unregulated contaminants are those that don't yet have a drinking water standard set by EPA. Every five years, EPA identifies a list of unregulated contaminants to be monitored for by the nation's water utilities over a three year period. This will occur in 2018-2020 with the fourth UCMR (UCMR-4). In 2018-2019, the City of Huntington Park began monitoring for a total of 30 chemical contaminants from its wells along with a corresponding sampling from the distribution system reflecting water from each well. Once EPA has obtained this occurrence data nationally, they are required to determine if there is a meaningful opportunity for increased health protection of drinking water by regulating these contaminants. The findings from this monitoring will be reported in Consumer Confidence Report through 2020.</p>				
FOURTH UNREGULATED CONTAMINANT MONITORING REGULATION (UCMR4)				
Monitored in 2019	CHEMICALS PARAMETERS	AVERAGE	RANGE	Minimum Reporting Level
Manganese (ug/l)		10.6	0.8 - 36.0	0.4 ug/l
				Naturally-occurring element; commercially available in combination with other elements and minerals; used in steel production, fertilizer, batteries and fireworks; drinking water and wastewater treatment chemical; essential nutrient. Manganese is one of

# CIUDAD DE HUNTINGTON PARK

## INFORME DE CONFIANZA DE CONSUMIDOR de 2020

Desde 1991, las agencias proveedoras de recursos hidráulicos de California han emitido información sobre el agua que se provee al consumidor. Este informe es una copia del informe sobre la calidad del agua potable que le proveímos el año pasado. Incluimos detalles sobre el origen del agua que toma, cómo se analiza, que contiene, y cómo se compara con los límites estatales y federales. Nos esforzamos por mantenerle informado sobre la calidad de su agua, y proveerle un abastecimiento confiable y económico que cumpla con todos los requisitos.

### ¿De Dónde Proviene el Agua que Tomo?

Su agua de la llave proviene de 2 fuentes: de las aguas naturales (subterránea) y de aguas superficiales (de los ríos). Bombeamos aguas naturales de profundos pozos locales. También usamos agua superficial de la agencia Metropolitan Water District del Sur de California (MWD) importada del Río Colorado y del proyecto State Water Project del Norte de California. Estas fuentes de agua, que se encuentra en el mapa al lado, el suministro de nuestra área de servicio. Este reporte informa sobre la calidad de nuestra agua subterránea y el abastecimiento del agua superficial del MWD.

### ¿Cómo Se Analiza Mi Agua Potable?

El agua que toma se analiza regularmente para asegurarnos de que no halla niveles altos de sustancias químicas, de radioactividad o de bacteria en el sistema de distribución y en las tomas de servicios. Estos análisis se llevan a cabo semanal, mensual, trimestral, y anualmente o con más frecuencia, dependiendo de la sustancia analizada. Bajo las leyes estatales y federales, se nos permite analizar algunas sustancias menos frecuentemente que los periodos anuales porque los resultados no cambian.

### ¿Cuales Son Los Estándares del Agua Potable?

La Agencia federal de Protección al Medio Ambiente (USEPA) impone los límites de las cantidades de ciertos contaminantes en el agua potable. En California, la Junta de Control de Recursos Hídricos del Estado (State Water Board) regula la calidad del agua de beber siguiendo normas que sean al menos tan estrictas como las normas federales. Historicamente, los estándares de California han sido más estrictos que los federales.

Hay dos tipos de límites conocidos como estándares. Los estándares primarios lo protegen de sustancias que potencialmente podrían afectar su salud. Las normas establecen los Niveles Contaminantes Máximos (MCL, en inglés) que se permite del contaminante primario o secundario en el agua de beber. Los abastecedores de agua deben asegurarse de que la calidad de esta cumpla con los Niveles Contaminantes Máximos (o MCLs, en inglés). No todas las sustancias tienen un Nivel Contaminante Máximo. El plomo y el cobre, por ejemplo, son regulados, por cierto nivel de acción. Si cualquier sustancia química sobrepasa el nivel de acción, se dará la necesidad de un proceso de tratamiento para rebajar los niveles en el agua de beber. Los abastecedores de agua deben cumplir con los Niveles Contaminantes Máximos para asegurar la calidad del agua.

Las Metas para la Salud Pública (MSP [o PHGs, en inglés]) son establecidas por la agencia estatal de California-EPA. Las

PHGs proveen más información con respecto a la calidad del agua, y son similares a los reglamentos federales nombrados Metas para Los Niveles de Contaminante *Maximos* (MNCM [o MCLGs, en inglés]). Las PHGs y MCLGs son metas a nivel recomendable. Las PHG y MCLG son ambas definidas como los niveles de contaminantes en el agua potable por debajo de los niveles donde no se esperan riesgos a la salud y no enforzables. Ambos niveles PHG y MCLG son concentraciones de una sustancia en las que no hay riesgos a la salud aún conocidos.

### ¿Cómo Interpreto Mi Informe de Calidad del Agua?

Aunque analizamos más de 100 sustancias, las normas nos requieren que reportemos solo aquellas que se encuentran en el agua. La primera columna en la tabla de la calidad de agua muestra la lista de las sustancias detectadas en el agua. La siguiente columna muestra la lista de la concentración promedio y el rango de concentraciones que se hallan encontrado en el agua que usted toma. En seguida están las listas de el MCL, el PHG y el MCLG, si estos son apropiados. La última columna describe las probables fuentes u origen de las sustancias detectadas en el agua potable.

Para revisar la calidad de su agua de beber, compare los valores por encima del promedio, mínimos y máximos y el Nivel Contaminante Máximo. Revise todos los químicos que se encuentran por encima del Nivel Contaminante Máximo. Si los químicos sobrepasan el Nivel Contaminante Máximo no significa que sea detrimental a la salud de inmediato. Más bien, se requiere que se realicen análisis más frecuentemente en el abastecimiento del agua por un corto período. Si los resultados muestran sobrepasar el MCL, el agua debe ser tratada para remover esa sustancia, o el abastecimiento de esta debe decomisionarse.

### ¿Por Qué Hay Tanta Publicidad Sobre La Calidad Del Agua Potable?

Las fuentes del agua potable (de ambas agua de la llave y agua embotellada) incluye ríos, lagos, arroyos, lagunas, embalses, manantiales, y pozos. Al pasar el agua por la superficie de los suelos o por la tierra, se disuelven minerales que ocurren al natural, y en algunas ocasiones, material radioactivo, al igual que pueden levantar sustancias generadas por la presencia de animales o por actividades humanas.

Entre los contaminantes que pueden existir en las fuentes de agua se incluyen:

- Contaminantes microbiales como los virus y la bacteria, los que pueden venir de las plantas de tratamiento de aguas negras, de los sistemas sépticos, de las operaciones de ganadería, y de la vida salvaje;
- Contaminantes inorgánicos, como las sales y los metales, los cuales pueden ocurrir naturalmente o como resultado del desagüe pluvial, industrial, o de alcantarillado, producción de gas natural y petróleo, minas y agricultura.
- Pesticidas y herbicidas, los cuales pueden venir de varias fuentes tales como la agricultura, del desagüe pluvial, y de usos residenciales;

- Contaminantes de otras sustancias químicas orgánicas, incluyendo químicos orgánicos volátiles y sintéticos que son productos de procesos industriales y de la producción de petróleo, y que pueden provenir de las estaciones de gasolina, desagües pluviales urbanos, y agricultura aplicación y de sistemas sépticos;
- Contaminantes radioactivos, los cuales pueden ocurrir naturalmente o que pueden ser resultados de las actividades de la producción de gas natural y minería.

A fin de asegurar que el agua de la llave es segura para beber, la Agencia de Protección Ambiental de Los Estados Unidos (USEPA) y el Tablero de Control de Recursos de Echar agua Estatal (Bordo Estatal) prescriben regulaciones que limitan la cantidad de ciertos contaminantes en el agua proporcionada por sistemas de agua públicas. Los reglamentos de Bordo Estatal también establecen límites para contaminantes en el agua embotellado que debe proporcionar la misma protección para la salud pública.

Toda el agua potable, incluyendo el agua embotellada, puede contener cantidades pequeñas de ciertos contaminantes. La presencia de contaminantes no necesariamente indica que haya algún riesgo de salud. Para más información acerca de contaminantes y riesgos a la salud favor de llamar a la USEPA encargada de proteger el agua potable al teléfono (1-800-426-4791). Usted puede obtener más información sobre el agua potable al conectarse al Internet en los siguientes domicilios:

- <http://www.epa.gov/dwstandardsregulations/2018-drinking-water-standards-and-advisory-tables> (el sitio Web del USEPA)
- [https://www.waterboards.ca.gov/drinking\\_water/certlic/drinkingwater/Chemicalcontaminants.html](https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/Chemicalcontaminants.html) (sitio Web de Bordo Estatal)

Si presente, los niveles elevados del plomo pueden causar el problema de salud serio, sobre todo para mujeres embarazadas y chiquitos. El plomo en el agua potable es principalmente de materiales y componentes asociados con líneas de servicios y a casa fontanería. La Ciudad de Huntington Park es responsable de proporcionar el agua potable de alta calidad, pero no puede controlar la variedad de materiales usados en la fontanería de componentes. Cuando su echar agua ha estado sentándose durante varias horas, usted puede minimizar el potencial para la exposición de plomo limpiando con agua su grifo durante 30 segundos a 2 minutos antes de usar el echar agua para beber o cocinarse. Si usted está preocupado por el plomo en su echar agua, usted puede desear hacer probar su echar agua. La información en el plomo en el agua potable, probando métodos, y pasos que usted puede tomar para minimizar la exposición está disponible de la Línea directa de Agua Potable Segura o en <http://www.epa.gov/lead>.

### **¿Debería Tomar Otras Precauciones?**

Algunas personas pueden ser más vulnerables a los contaminantes en el agua potable que el público en general. Las personas que tienen problemas inmunológicos, o sea esas personas que estén en tratamiento por medio de quimioterapia cancerosa; personas que tienen órganos transplantados, o personas con SIDA o desordenes inmunológicos, personas de edad avanzada, y los bebés que son particularmente susceptibles a ciertas infecciones. Estas personas deben de consultar a sus proveedores de salud médica. Las guías de la

USEPA/Centros de Control de Enfermedades aconsejan cómo disminuir los riesgos para prevenir la infección de Cryptosporidium y otros contaminantes microbiales están disponibles por teléfono de la USEPA encargada de proteger el agua potable al teléfono (1-800-426-4791).

### **Valoración de su Abastecimiento de Agua**

El distrito Metropolitano de agua del Sur de California completo una valoración de su abastecimiento del Río Colorado y del Proyecto de Agua del Estado en el 2002. El abastecimiento del Río Colorado es considerado más vulnerable a la recreación, al agua que corre de la ciudad después de una tormenta, a la creciente urbanización en la cuenca, y aguas residuales. El Proyecto de abastecimiento de agua del Estado es considerado más vulnerable al agua que corre de la ciudad después de una tormenta, a la fauna, la agricultura, la recreación, y aguas residuales. Teléfono el distrito Metropolitano de agua del Sur de California para un copie de una valoración al (213) 217-6850.

La ciudad de Huntington Park condujo una valoración de su abastecimiento de aguas subterráneas en el 2004. El abastecimiento de aguas subterráneas es considerado mas vulnerable a sistemas de colección de alcantarillados; a estaciones de gasolina; y a lugares de almacenaje para agencias de gobierno y contratistas. Los clientes pueden solicitar una copia de la Evaluación de fuentes de agua enviando una solicitud por correo a la ciudad de Huntington Park: 6550 Miles Avenue, Huntington Park, CA 90255.

### **Cómo Puedo Participar en las Decisiones Sobre Asuntos Acerca del Agua Que Me Puedan Afectar ?**

El público es bienvenido a asistir a reuniones del Ayuntamiento el primer y tercer martes de cada mes a las 18:00 horas en Huntington Park City Hall ubicado en 6550 Miles Avenue, Huntington Park, CA 90255.

### **¿Cómo Me Pongo En Contacto Con Mi Agencia del Agua Si Tengo Preguntas Sobre La Calidad Del Agua?**

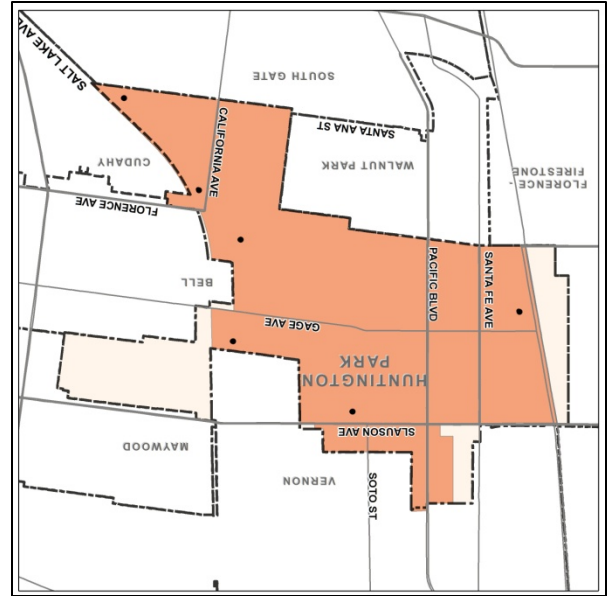
Si tiene preguntas específicas sobre la calidad del agua de su grifo, comuníquese con el Sr. César Roldán, Director de Obras Públicas al (323) 584-6274 o [crolდან@hpcga.gov](mailto:crolدان@hpcga.gov).

### **Algunas extremidades provechosas de la conservación del agua**

- arreglar los grifos que gotean en su hogar - excepto hasta 20 galones cada día por cada detenido de fugas
- Guardar entre 15 y 50 galones por cada vez que el lavado sólo cargas completas de ropa
- Ajuste sus regaderas de modo que el agua caiga en su césped / jardín, no la acera / calzada - excepto 500 galones por mes
- Utilice pajote orgánico alrededor de las plantas para reducir la evaporación - guardar cientos de galones por año
- Visite <http://www.epa.gov/watersense> para obtener más información.

Visítenos en la página [www.hpcga.gov](http://www.hpcga.gov)

# CITY OF HUNTINGTON PARK 2020 CONSUMER CONFIDENCE REPORT



Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien. Para obtener una copia en Español, llame a (323) 584-6274.

CITY OF HUNTINGTON PARK  
6900 BISSELL ST  
HUNTINGTON PARK, CA 90255



## **Appendix K: UWMP Notices: 60-Day, 2-Week, & 1-Week**

**City of Huntington Park 2020 Urban Water Management Plan**



## Department of Public Works

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March 2, 2021

Mr. Greg Lindsay  
Deputy City Engineer  
Bell City Hall  
6330 Pine Avenue  
Bell, CA 90201

Subject: **City of Huntington Park Urban Water Management Plan - 2020 Update  
Notice Pursuant to Section 10621(b) of the California Water Code**

The City of Huntington Park is in the process of preparing its 2020 Urban Water Management Plan (UWMP). UWMPs are prepared by California's urban water suppliers to support their long-term resource planning and ensure adequate water supplies are available to meet existing and future water demands. Every urban water supplier that either provides over 3,000 acre-feet of water annually or serves 3,000 or more connections is required to prepare an UWMP every five years.

Pursuant to the requirement of the California Water Code, Division 6, Part 2.6 Urban Water Management Planning, Section 10621 (b), every urban water supplier required to prepare an UWMP shall, at least 60 days prior to the public hearing on the UWMP required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the UWMP and considering amendments or changes to the UWMP.

This letter is intended to notify your agency that the City of Huntington Park is in the process of preparing the 2020 UWMP. The City will hold a public hearing to consider, and to receive public comments on its draft 2020 UWMP. The public hearing will be held a minimum of 60 days from the date of this letter at the City's Council Chambers. A public notice stating the specific date, time, and location of the public hearing will be issued two (2) weeks prior to said hearing. A draft copy of the City's 2020 UWMP will be made available thirty (30) days prior to the public hearing.

If your agency would like more information, please direct any inquiries to my attention at (323) 584-6320 or [croldan@hpcal.gov](mailto:croldan@hpcal.gov).

Sincerely,

Cesar Roldan  
Director of Public Works



## Department of Public Works

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March 2, 2021

Mr. Kevin Hunt  
Central Basin Municipal Water District  
6252 Telegraph Rd.  
Commerce, CA 90040

Subject: **City of Huntington Park Urban Water Management Plan - 2020 Update  
Notice Pursuant to Section 10621(b) of the California Water Code**

The City of Huntington Park is in the process of preparing its 2020 Urban Water Management Plan (UWMP). UWMPs are prepared by California's urban water suppliers to support their long-term resource planning and ensure adequate water supplies are available to meet existing and future water demands. Every urban water supplier that either provides over 3,000 acre-feet of water annually or serves 3,000 or more connections is required to prepare an UWMP every five years.

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Sincerely,

Cesar Roldan  
Director of Public Works



## Department of Public Works

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March 2, 2021

County of Los Angeles  
Clerk-Recorder  
12400 Imperial Hwy  
Norwalk, CA 90650

Subject: **City of Huntington Park Urban Water Management Plan - 2020 Update  
Notice Pursuant to Section 10621(b) of the California Water Code**

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Sincerely,

Cesar Roldan  
Director of Public Works



## Department of Public Works

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March 2, 2021

Ms. Laura Shell  
Los Angeles County  
Department of Regional Planning Chair  
320 West Temple Street, 13th Floor  
Los Angeles, CA 90012

Subject: **City of Huntington Park Urban Water Management Plan - 2020 Update  
Notice Pursuant to Section 10621(b) of the California Water Code**

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Sincerely,

Cesar Roldan  
Director of Public Works



## Department of Public Works

---

March 2, 2021

Mr. Paul Schubert  
Golden State Water  
630 E. Foothill Blvd.  
San Dimas, CA 91773

Subject: **City of Huntington Park Urban Water Management Plan - 2020 Update  
Notice Pursuant to Section 10621(b) of the California Water Code**

The City of Huntington Park is in the process of preparing its 2020 Urban Water Management Plan (UWMP). UWMPs are prepared by California's urban water suppliers to support their long-term resource planning and ensure adequate water supplies are available to meet existing and future water demands. Every urban water supplier that either provides over 3,000 acre-feet of water annually or serves 3,000 or more connections is required to prepare an UWMP every five years.

Pursuant to the requirement of the California Water Code, Division 6, Part 2.6 Urban Water Management Planning, Section 10621 (b), every urban water supplier required to prepare an UWMP shall, at least 60 days prior to the public hearing on the UWMP required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the UWMP and considering amendments or changes to the UWMP.

This letter is intended to notify your agency that the City of Huntington Park is in the process of preparing the 2020 UWMP. The City will hold a public hearing to consider, and to receive public comments on its draft 2020 UWMP. The public hearing will be held a minimum of 60 days from the date of this letter at the City's Council Chambers. A public notice stating the specific date, time, and location of the public hearing will be issued two (2) weeks prior to said hearing. A draft copy of the City's 2020 UWMP will be made available thirty (30) days prior to the public hearing.

If your agency would like more information, please direct any inquiries to my attention at (323) 584-6320 or [croldan@hpca.gov](mailto:croldan@hpca.gov).

Sincerely,

Cesar Roldan  
Director of Public Works



## Department of Public Works

---

March 2, 2021

Maywood Mutual Water Company #1  
5953 Gifford Avenue  
Huntington Park, CA 90255

**Subject: City of Huntington Park Urban Water Management Plan - 2020 Update  
Notice Pursuant to Section 10621(b) of the California Water Code**

The City of Huntington Park is in the process of preparing its 2020 Urban Water Management Plan (UWMP). UWMPs are prepared by California's urban water suppliers to support their long-term resource planning and ensure adequate water supplies are available to meet existing and future water demands. Every urban water supplier that either provides over 3,000 acre-feet of water annually or serves 3,000 or more connections is required to prepare an UWMP every five years.

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If your agency would like more information, please direct any inquiries to my attention at (323) 584-6320 or [croldan@hpca.gov](mailto:croldan@hpca.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "Cesar Roldan".

Cesar Roldan  
Director of Public Works



## Department of Public Works

---

March 2, 2021

Mr. Chris Castillo  
City of South Gate: City Hall  
8650 California Avenue  
South Gate, CA 90280

Subject: **City of Huntington Park Urban Water Management Plan - 2020 Update  
Notice Pursuant to Section 10621(b) of the California Water Code**

The City of Huntington Park is in the process of preparing its 2020 Urban Water Management Plan (UWMP). UWMPs are prepared by California's urban water suppliers to support their long-term resource planning and ensure adequate water supplies are available to meet existing and future water demands. Every urban water supplier that either provides over 3,000 acre-feet of water annually or serves 3,000 or more connections is required to prepare an UWMP every five years.

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If your agency would like more information, please direct any inquiries to my attention at (323) 584-6320 or [croldan@hpcal.gov](mailto:croldan@hpcal.gov).

Sincerely,

Cesar Roldan  
Director of Public Works



## Department of Public Works

---

March 2, 2021

Mr. Daniel Wall  
Vernon City Hall  
4305 S. Santa Fe Avenue  
Vernon CA, 90058

Subject: **City of Huntington Park Urban Water Management Plan - 2020 Update  
Notice Pursuant to Section 10621(b) of the California Water Code**

The City of Huntington Park is in the process of preparing its 2020 Urban Water Management Plan (UWMP). UWMPs are prepared by California's urban water suppliers to support their long-term resource planning and ensure adequate water supplies are available to meet existing and future water demands. Every urban water supplier that either provides over 3,000 acre-feet of water annually or serves 3,000 or more connections is required to prepare an UWMP every five years.

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Sincerely,

Cesar Roldan  
Director of Public Works



## Department of Public Works

---

March 2, 2021

Attn: Water Division, General Manager  
Walnut Park Mutual Water CO.  
2460 E. Florence Avenue  
Walnut Park, CA 90255

Subject: **City of Huntington Park Urban Water Management Plan - 2020 Update  
Notice Pursuant to Section 10621(b) of the California Water Code**

The City of Huntington Park is in the process of preparing its 2020 Urban Water Management Plan (UWMP). UWMPs are prepared by California's urban water suppliers to support their long-term resource planning and ensure adequate water supplies are available to meet existing and future water demands. Every urban water supplier that either provides over 3,000 acre-feet of water annually or serves 3,000 or more connections is required to prepare an UWMP every five years.

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Sincerely,

Cesar Roldan  
Director of Public Works



## Department of Public Works

---

March 2, 2021

Mr. Robb Whitaker  
Water Replenishment District.  
4040 Paramount Blvd.  
Lakewood, CA 90712

Subject: **City of Huntington Park Urban Water Management Plan - 2020 Update  
Notice Pursuant to Section 10621(b) of the California Water Code**

The City of Huntington Park is in the process of preparing its 2020 Urban Water Management Plan (UWMP). UWMPs are prepared by California's urban water suppliers to support their long-term resource planning and ensure adequate water supplies are available to meet existing and future water demands. Every urban water supplier that either provides over 3,000 acre-feet of water annually or serves 3,000 or more connections is required to prepare an UWMP every five years.

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Sincerely,

Cesar Roldan  
Director of Public Works



**-Newspaper Ad-  
Notice of Public Hearing  
For 2020 Urban Water Management Plan and  
Availability of Draft Plan for Review**

The City of Huntington Park hereby releases its Draft 2020 Urban Water Management Plan (UWMP) for public review. The UWMP will be available through June 1<sup>st</sup> at City Hall located at 6550 Miles Ave, Huntington Park CA 90255. An electronic (PDF) copy can also be obtained by contacting the City and requesting a PDF copy.

A Public Hearing will be held as an agenda item of the City's regularly scheduled Council Meeting on June 1<sup>st</sup>, 2021 to consider comments on the Draft 2020 UWMP and to formally adopt the UWMP by resolution. The Council Meetings are held at the City Hall Council Chambers at 6550 Miles Ave, Huntington Park CA 90255. The time of the Public Hearing will be posted on the Council Agenda which will be released a few days prior to the June 1<sup>st</sup> Council meeting.

The City encourages the active involvement of its citizens. If you have any questions concerning the 2020 UWMP, please contact: Cesar Roldan at (323) 584-6320 or by email [croldan@hpca.gov](mailto:croldan@hpca.gov).



## Department of Public Works

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### **CITY OF HUNTINGTON PARK**

#### **Notice of Public Hearing For 2020 Urban Water Management Plan and Availability of Draft Plan for Review**

The City of Huntington Park hereby releases its Draft 2020 Urban Water Management Plan (UWMP) for public review. The UWMP will be available through June 1<sup>st</sup> at City Hall located at 6550 Miles Ave, Huntington Park CA 90255. An electronic (PDF) copy can also be obtained by contacting the City and requesting a PDF copy.

A Public Hearing will be held as an agenda item of the City's regularly scheduled Council Meeting on Tuesday, June 1<sup>st</sup>, 2021 to consider comments on the Draft 2020 UWMP and to formally adopt the UWMP by resolution. The Council Meetings are held at the City Hall Council Chambers at 6550 Miles Ave, Huntington Park CA 90255. The time of the Public Hearing will be posted on the Council Agenda which will be released a few days prior to the June 1<sup>st</sup> Council meeting.

The City encourages the active involvement of its citizens. If you have any questions concerning the 2020 UWMP, please contact: Christina Dixon, Analyst, at (323) 584-6274 or by email [cdixon@hpca.gov](mailto:cdixon@hpca.gov).



## **Appendix L: LA Basin Adjudication Summary and Central Basin Amended Judgment**

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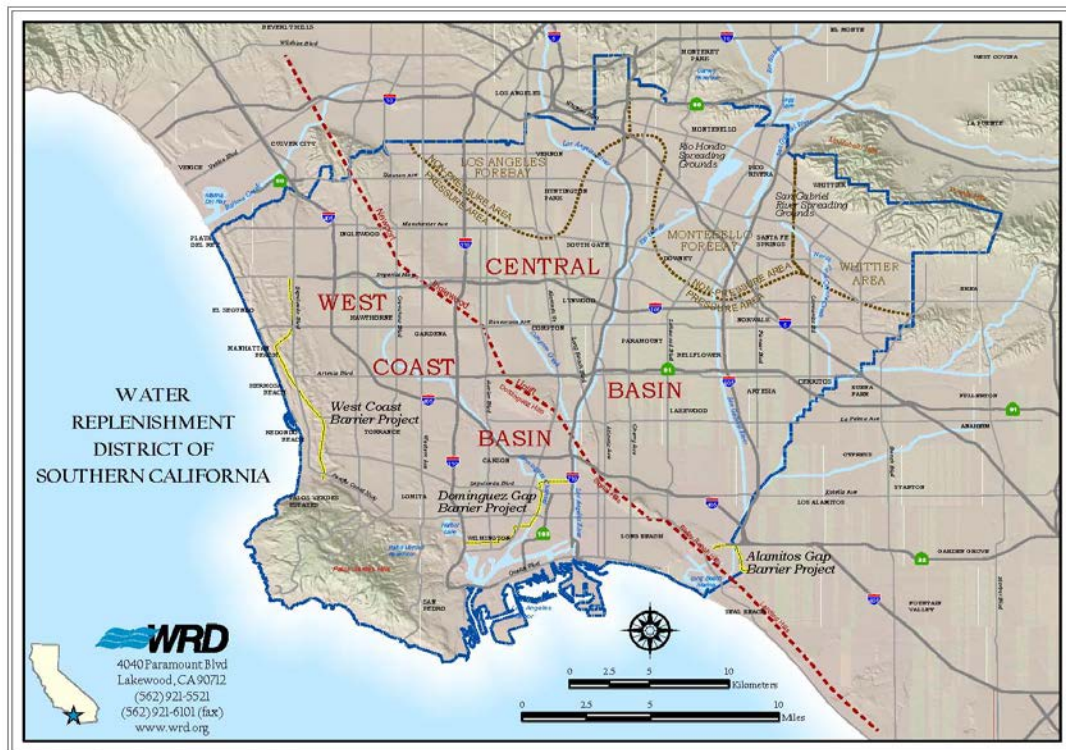
**City of Huntington Park 2020 Urban Water Management Plan**

# RECLAMATION

*Managing Water in the West*

## Los Angeles Basin Groundwater Adjudication Summary

### Los Angeles Basin Stormwater Conservation Study



U.S. Department of the Interior  
Bureau of Reclamation  
Engineering Services Office  
Boulder City, Nevada

July 2014

**PROJECT INFORMATION**PROJECT NUMBER: **A10-1862-6019-135**PROJECT NAME: **Los Angeles Basin Groundwater Adjudication  
Summary**PROJECT MANAGER: **Douglas B. Blatchford, P.E.**CLIENT: **Southern California Area Office (SCAO)****Project Staff**

Amy Witherall SCAO

Jack Simes SCAO

Peer Reviewers Scott Tincher, P.E. ESO

Tom Nichols, P.E. ESO

**Distribution List****Project Summary**

Project Start Date June 2010

Project Completion Date July 2014

# Contents

	Page
<b>Contents .....</b>	<b>i</b>
<b>Acronyms and Abbreviations .....</b>	<b>ii</b>
<b>Introduction.....</b>	<b>1</b>
<b>Central Basin.....</b>	<b>2</b>
Adjudication Summary .....	2
<b>West Coast Basin.....</b>	<b>5</b>
Adjudication Summary .....	5
<b>Main San Gabriel Basin .....</b>	<b>8</b>
Adjudication Summary .....	8
<b>Raymond Basin .....</b>	<b>10</b>
Adjudication Summary .....	10
<b>Upper Los Angeles River Basin .....</b>	<b>12</b>
Adjudication Summary .....	12
<b>References .....</b>	<b>15</b>

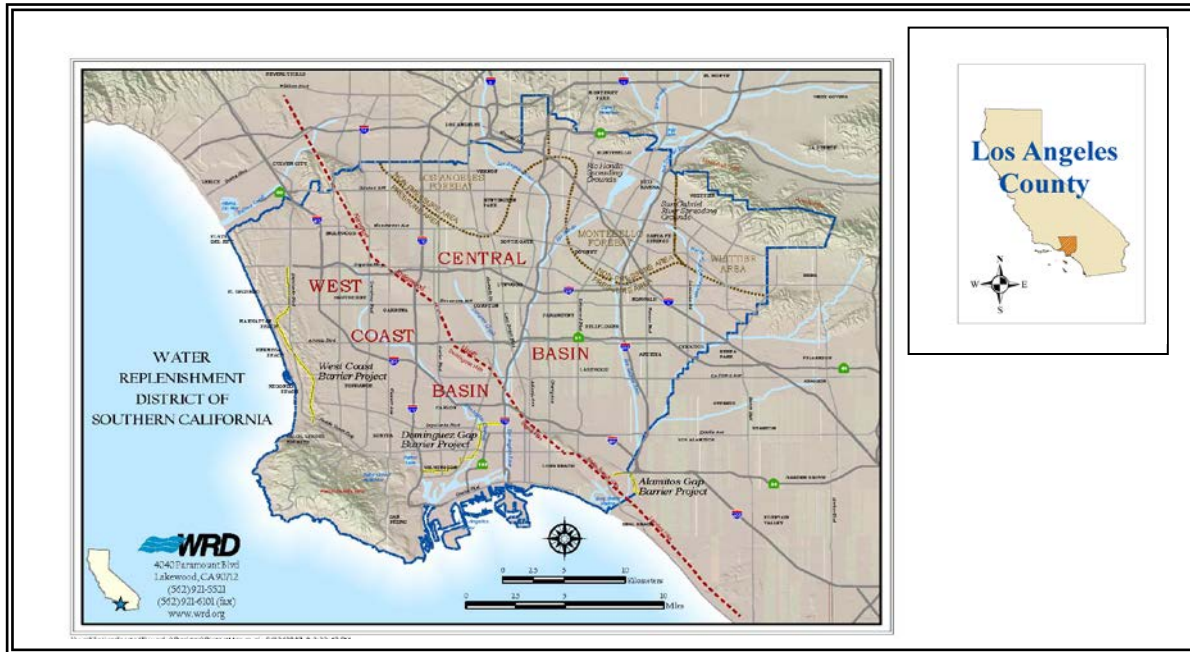
## Acronyms and Abbreviations

AF	Acre-feet
AFY	Acre-feet per year
APA	Annual Pumping Allocation
CBMWD	Central Basin Municipal Water District
DPH	California Department of Public Health
DWR	California Department of Water Resources
JPL	NASA Jet Propulsion Laboratory
LACDPW	Los Angeles County Department of Public Works
LACSD	Los Angeles County Sanitation District
MGD	Million gallons per day
Metropolitan	The Metropolitan Water District of Southern California
RBMB	Raymond Basin Management Board
SFB	San Fernando Basin
ULARA	Upper Los Angeles River Area
WRD	Water Replenishment District of Southern California

## Introduction

This report is a brief summary of adjudicated groundwater basins within Los Angeles County, California. These basins include the Central Basin, West Coast Basin, Main San Gabriel Basin, Raymond Basin, and Upper Los Angeles River Area Basin. The purpose of this study is to organize and compile adjudication background information for ease of reference. Further detailed study is anticipated in the Los Angeles Basin; this report brings together not only the history of adjudication, but also the resulting rules and regulations related to respective court orders. This is important because operations and maintenance of each respective basin are ultimately tied to rules and guidelines set by the Court. The scope of this report is limited to a brief summary for the basins listed above.

## Central Basin



## Adjudication Summary

According to The Metropolitan Water District of Southern California (Metropolitan) [3]:

“The judgment sets out the annual pumping rights of each of the parties; appoints DWR as watermaster; specifies the duties, powers and responsibilities of watermaster; provides for carryover of 20% of annual pumping rights for one year, or 35% carryover under the ‘drought carryover’ provisions; 20% over-pumping to be paid back the following year, or prorated over the following 5 years under specified conditions; provides for an exchange pool wherein a right not used by one party can be made available to another. Judgment makes no provision for storage and recapture of stored water beyond the specified extraction right and specifies that ‘no party...has any right to extract ground water from Central Basin except as herein affirmatively determined.’ ”

The following is summarized from the Water Replenishment District of Southern California (WRD) website [17], the 2009 proposed judgment amendment [12], The Metropolitan Water District of Southern California [8][10], and the Central Basin Municipal Water District (CBMWD) website [1]:

Central Basin was adjudicated in 1965, and the judgment was amended in 1991. The judgment does not address storage and expressly provides that extraction rights in the basin are limited to those specified in the judgment. Under the existing judgment, there is no opportunity to use additional recycled water each year to increase groundwater pumping. Any opportunity to utilize

yield from this proposed project would be limited to meeting WRD's needs for basin replenishment to support adjudicated pumping rights.

Total storage in the Central Basin is estimated to be approximately 13.8 million acre-feet (AF). Unused storage space is estimated to be approximately 1.1 million AF. Of the unused storage space, the amount available for groundwater storage is approximately 330,000 AF, assuming that up to 75 feet below the ground surface is actually available. Basin parties have agreed with study findings that 330,000 acre-feet of unused storage space exists in the Central Basin. Following extended negotiations among basin rights holders, a proposed judgment amendment has been developed to allow beneficial use of the 330,000 acre-feet of storage space. The proposed judgment amendment was submitted to the Court for consideration in April 2009. Support for the amendment is not unanimous, and opponents (cities of Downey, Cerritos and Signal Hill, and CBMWD) have submitted motions to the Court. Initial hearings are scheduled for June and July 2009.

The proposed judgment amendment would allow for substantial increased storage with annual maximum basin-wide increase in pumping not exceeding 87,000 AF (increase of 40 percent of the annual pumping allocation [APA]) without additional review and approval assuming full participation by all the basin producers. The maximum amount of storage by any producer is two times the producer's APA, and annual extraction of this stored water is not to exceed 120 percent by any producer without specific approval. The proposed amendment provides for a 125,000 acre-foot Basin Operating Reserve for WRD's operations, but additional pumping by basin producers is maximized in the above calculation.

Total average Metropolitan firm demands in 2020 for CBMWD and the City of Compton are about 83,000 acre-feet per year (AFY). The City of Los Angeles' demand is not included in this analysis. In addition, the City of Long Beach is not included because the Los Angeles County Sanitation District (LACSD) has excess capacity in their Long Beach plant that Long Beach would use for a similar project in the future. Average projected replenishment demands for Central Basin are projected to be about 27,500 AFY in 2020. It is important to note that the replenishment water purchased by WRD for the entire basin (including Long Beach and Los Angeles) is delivered through CBMWD facilities. For this analysis, it is assumed that this practice continues in the future.

Under the terms of the currently proposed adjudication amendment, agencies within CBMWD and Compton service areas would have the ability to store and extract up to 40 percent of their APA (currently about 169,000 AFY), or an additional 68,000 AFY. However, because of basin constraints such as water quality, blending requirements or reduction in operational flexibility, firm project participation is estimated to be 50 percent, or 33,000 AFY.

- With the 75 percent blending requirement from the California Department of Public Health (DPH), the ability to store and extract recycled water from LACSD for firm Metropolitan demand would be about 25,000 AFY by 2020.
- After 5-10 years of operation, it is assumed that 100 percent recycled water could be stored to replace the firm demand in the Central Basin, so the project yield would increase to about 33,000 AFY.

- An additional 20,000 AFY of recycled water could be spread at Montebello Forebay to replace projected replenishment demand for a total of 45,000 AFY by 2020 and 53,000 AFY by 2030.

Spreading basins in the Montebello Forebay area and the San Gabriel River channel within the Central Basin cover more than 1,000 acres with a capacity of about 350 million gallons per day (MGD). However, the actual amount that can be spread is limited by mounding and other factors. Total average annual spreading for the past 20 years has been approximately 135,000 AFY. Spreading utilizes local runoff, untreated imported water, and recycled water. Assuming a 75:25 blend of recycled water to imported water, it would be possible to offset about 20,000 AFY of the projected imported water replenishment demand at the Montebello Forebay.

The Los Angeles Forebay was historically a recharge area for the Los Angeles River. This forebay's recharge capacity has been substantially reduced since the river channel was lined. Recharge is now limited to deep percolation of precipitation, in-lieu when available, and subsurface inflow from the Montebello Forebay to the east, the Hollywood Basin, and relatively small amounts from the San Fernando Valley through the Los Angeles Narrows. Therefore, the only feasible recharge method for this area is an injection wellfield. Additional extraction wells would be needed within the CBMWD service area to extract the water. Facilities would be owned and operated by the partner agencies. However, responsibility for payments for operational and maintenance costs (\$200 to \$250/AF in 2009 dollars) is yet to be determined.

At this stage of the analysis, it would be inappropriate to assume substantial additional annual pumping beyond that proposed in the judgment amendment would be approved by 2020. Such approval would require modeling and review to assure that the proposed pumping would not cause material physical harm to the basin or to another producer. Any analysis would need to address impacts to water local water levels due to pumping depressions and movement of any contamination. The decision-making process proposed in the judgment amendment would require majority vote by two independent bodies comprising the proposed new basin watermaster – the WRD Board and a storage panel of producers to be created.

Even under the most conservative assumptions, there is a moderate risk that during wet periods or various demand periods that the entire amount of recycled water could not be stored or extracted. This situation would result in the need to have the water delivered directly to the Los Angeles River or, after the outfalls from LACSD are repaired, directly to the outfall.

## West Coast Basin



## Adjudication Summary

According to The Metropolitan Water District of Southern California [3]:

“The judgment sets out the annual pumping rights of each party, provides for carryover of 10% of annual pumping rights for one year, overpumping of 10% to be replaced the following year, an exchange pool wherein a right not used by one party can be made available to another, emergency overpumping up to a total of 10,000AF under specified conditions, and appoints the California Department of Water Resources (DWR) as watermaster.”

The following is summarized from the Water Replenishment District of Southern California (WRD) [17], The Metropolitan Water District of Southern California [7][10], and the West Basin Municipal Water District websites [15]:

Groundwater storage and extraction in the West Coast Basin is governed by the basin adjudication with excess production restricted to emergencies. An amended judgment establishing water rights of 64,478 AF and enjoining excess extractions was filed in 1977 and most recently amended in 1989.

Total storage in the West Coast Basin is estimated to be approximately 6.5 million AF. Unused storage space is estimated to be approximately 1.1 million AF. Of the unused storage space, the amount available for groundwater storage is only 120,000 AF because the upper 75 feet cannot be used for groundwater storage. The judgment makes no provision for establishment of storage

accounts with provision of increased pumping of stored water or for enhanced recharge and increased production. Thus, 120,000 acre-feet of identified unused storage space in the West Coast Basin is difficult to put to beneficial use.

As a result, a major proposed amendment to the judgment has been developed after several years of negotiations to address use of 120,000 acre-feet of unused storage space in the basin and submitted to the court for consideration in April 2009. This amendment is reportedly unopposed by water rights holders in West Coast Basin. The proposed amendment would allow each rights holder to store and extract up to 40 percent of their annual adjudicated pumping allocation (APA, or annual pumping rights under the judgment) subject to review and approval. Regional storage projects would be allowed to use up to 9,600 AF of space. Approximately 50,000 AF of dewatered storage space would be designated as Basin Operating Reserve and held for replenishment operations of the WRD.

Total average firm Metropolitan demands in 2020 for West Basin MWD and the City of Torrance are projected to be about 168,000 acre-feet per year (AFY) with limited change projected by 2030. It is assumed that the City of Los Angeles would not participate in this project because they are implementing a similar project for their own recycled water plants. Neither West Basin MWD nor the City of Torrance is expected to have a replenishment demand on Metropolitan in 2020 or 2030.

Under the currently proposed adjudication amendment, groundwater producers within the West Basin MWD and Torrance service areas would have the ability to store and extract up to 40 percent of their annual production rights of 63,000 AFY, or an additional 26,000 AFY. Because of basin constraints such as water quality, blending requirements or reduction in operational flexibility, project participation is estimated to be 50 percent, or 13,000 AFY.

- With the 75 percent blending requirement from the DPH, the ability to store and extract recycled water from LACSD would be about 10,000 AFY by 2020 (Phase 1).
- After 5-10 years of operation, it is assumed that 100 percent recycled water could be stored in the West Coast Basin, so about 13,000 AFY (10-15 MGD) could be stored by 2030 (Phase 2).

Because there are no spreading locations available in this area, the proposed project would need to include:

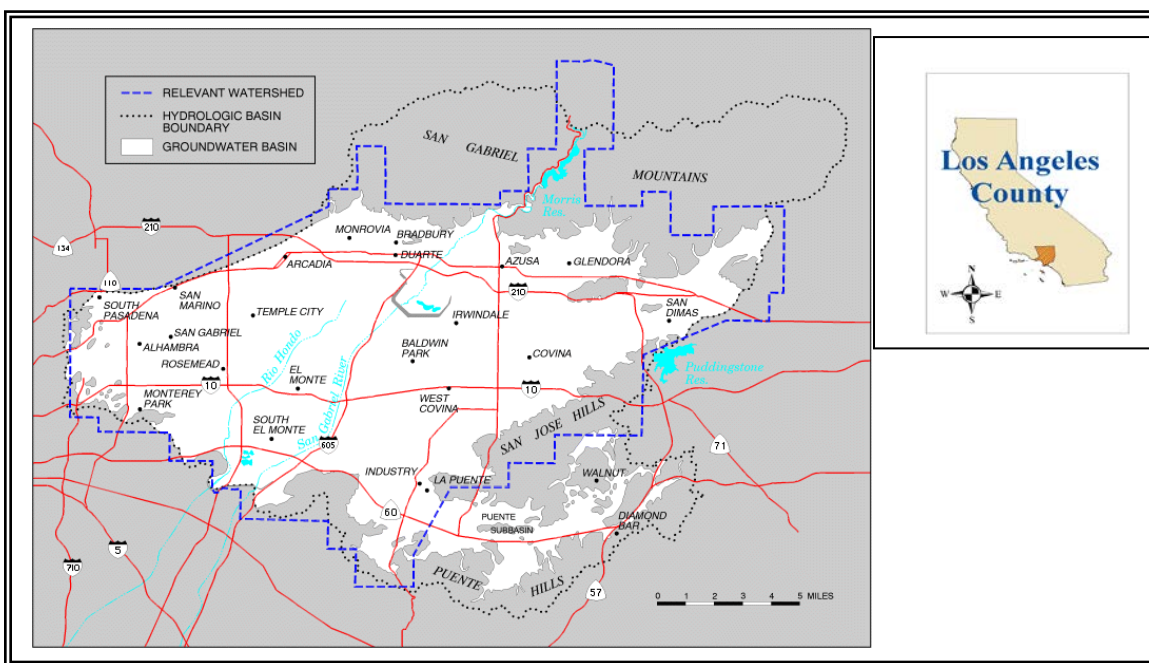
- Ten to 15 new injection wells and 5 to 10 new extraction wells.
- About 5 MGD could be treated by the existing Brewer and Goldsworthy desalters and associated wells.

The project could be implemented directly with the West Basin MWD and the City of Torrance, with storage accomplished through partnerships with the Los Angeles Department of Public Works (LACDPW) and/or WRD, and extraction accomplished by producers, as applicable.

Any change beyond the adjudication currently proposed in this basin would likely be unsuccessful at this time. Considerable efforts have resulted in the current proposal, and it has yet to be approved and tested. In addition, there are parties such as the City of Los Angeles and

West Basin MWD who are already planning to use recycled water for recharge, potentially limiting the participation in this project. Because of seawater intrusion issues, water quality may also be a concern. The proposed amendment to the adjudication would need to be approved to accommodate the additional production from the desalters without the water quality restrictions currently applied. Facilities would be owned and operated by the partner agencies. Responsibility for payments of operational and maintenance costs (\$200 to \$250/AF in 2009 dollars) is yet to be determined. Under this option, there is moderate risk to Metropolitan that the project would not be successful.

## Main San Gabriel Basin



## Adjudication Summary

According to The Metropolitan Water District of Southern California [3]:

“Judgment defines natural safe yield under 1967 cultural conditions, specifies annual pumping rights, allows one year for carry-over of unused water rights, enjoins unauthorized recharge, restricts export of groundwater. Judgment establishes a watermaster to administer the judgment including assumption of Make-Up obligation on behalf of the basin, storage of supplemental water, and concern with water quality matters. Judgment provides for determination of annual operating safe yield, specifies basin operating criteria that replacement water shall not be spread when the water level at the Key Well exceeds elevation 250 and that replacement water shall be spread as practicable to maintain the water level at the Key Well above elevation 200. Judgment Exhibit H estimates that a usable volume of 400,000 AF of storage space within the operating range of elevations 200 to 250. Judgment allows overproduction of rights, but this production incurs replacement water assessment.”

The following is summarized from The Metropolitan Water District of Southern California [6][10] and the Main San Gabriel Basin Watermaster website [2]:

The Main San Gabriel Basin was originally adjudicated in 1973, with the judgment most recently amended in 1989. The judgment specifies annual pumping rights (prescriptive pumping rights total to 197,634 AFY) while establishing a watermaster that determines the percentage of rights that can be pumped each year without incurring an obligation to pay for replacement water.

There is no firm cap on pumping. Since 1995, annual groundwater production has ranged from approximately 250,000 AFY to 275,000 AFY. The judgment specifies a basin operating range tied to the Key Well elevation (200' to 250') that provides for 400,000 AF of groundwater production, and specifies that imported replacement water shall not be spread when the water level at the Key Well exceeds the upper elevation of the operating range.

The production of this basin is supported by storm water captured behind a series of four dams on the San Gabriel River and by over 1,000 acres of spreading basins. Imported water is used to supplement this recharge, and recycled water could be used in place of the imported water. Active spreading of runoff and imported water recharges 100,000 to 140,000 AFY in average years with substantial swings in dry and wet years (60,000 AFY to over 400,000 AFY). However, in wet years, the demand for supplemental replenishment water is substantially reduced. In order for Main San Gabriel Basin to make a firm commitment for a substantial annual amount of recharge water, the judgment would need to be amended to allow replacement water to be spread above the Key Well upper elevation.

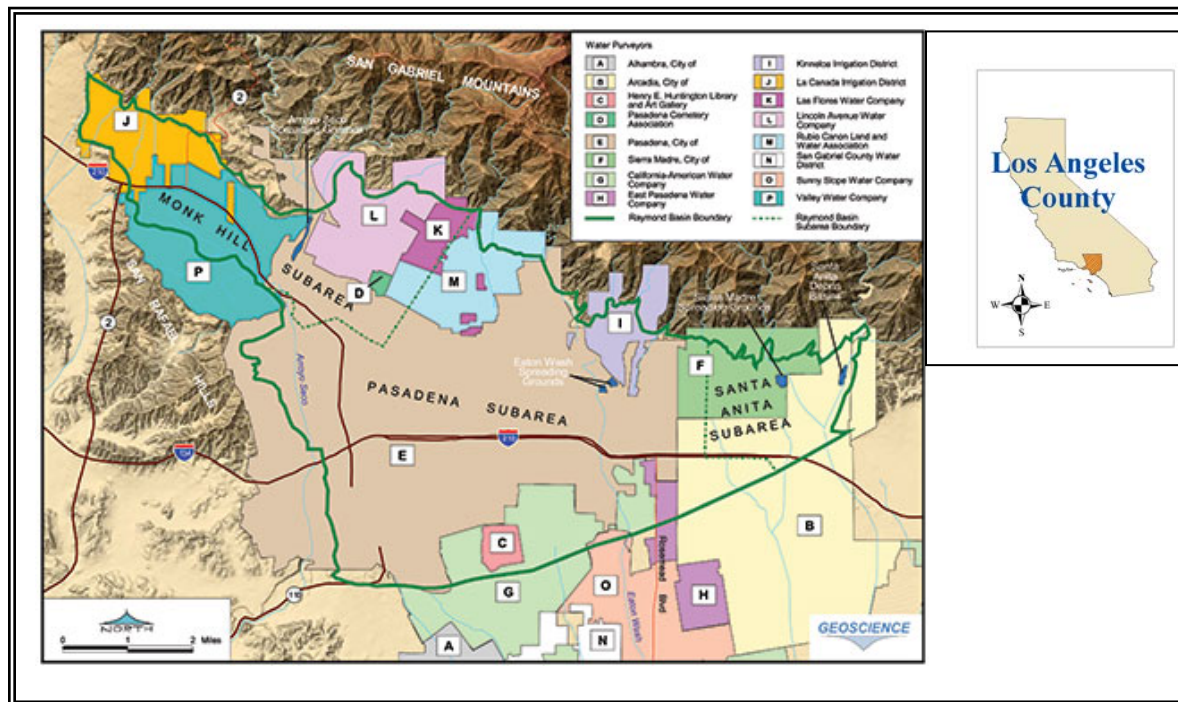
According to the Main San Gabriel Watermaster, the total amount of water in storage for the Main San Gabriel Basin is approximately 8.6 million AF. Usable storage within the operating range is approximately 800,000 AF while the unused storage space is about 500,000 AF. Total average Metropolitan firm demands in 2020 for the Upper District are about 18,000 AFY, up to 28,000 AFY by 2030, with an average projected replenishment demand of about 27,000 AFY. It is assumed that 75 percent of the projected Metropolitan demand (14,000 AFY) could be replaced with recycled water.

- With the 75 percent blending requirement from DPH, the ability to store and extract recycled water from LACSD would be about 10,000 AFY by 2020.
- After 5-10 years of operation, it is assumed that 100 percent firm recycled water could be stored in the Main San Gabriel Basin, or about 14,000 AFY by 2030.
- An additional 25,000 AFY could be spread to replace existing imported replenishment demands, for a total of 35,000 AFY in 2020 and 39,000 AFY by 2030.

The spreading grounds are operated by LACDPW, while the member agencies arrange for delivery of water supplies for those operations. A similar partnership among Metropolitan, member agencies, LACDPW, and the Main San Gabriel Basin watermaster would be the most likely mechanism for implementation.

The Main San Gabriel Basin is upstream of the Central Basin. There is a moderate risk that during wet years when large quantities of water are spread in the Main San Gabriel Basin that mounding can occur in Central Basin, thereby reducing the amount that can be stored in Central Basin. In addition, various groundwater treatment facilities associated with Superfund sites in the Main San Gabriel Basin may be affected by changes in water level. Like Central Basin, there is moderate risk to Metropolitan that the water would not be used even under the most conservative assumptions. Under the aggressive assumption, the risks are substantially higher to both Metropolitan and LACSD.

## Raymond Basin



## Adjudication Summary

According to The Metropolitan Water District of Southern California [3]:

“Judgment specifies safe yield in the Eastern and Western units of the basin, addresses rights to capture surface water for spreading and percolation and rights to recapture spread water, specifies groundwater pumping rights of the parties, and allows for 10% overpumping to be made up in the following year and 10% carryover for one year. Judgment establishes the Raymond Basin Management Board as watermaster with specified powers and responsibilities including: protecting the long-term quantity and quality of the groundwater supply, utilizing the groundwater storage capacity of the basin for the maximum advantage of the parties, integrating surface and groundwater supplies, and mutual cooperation.”

The following is summarized from The Metropolitan Water District of Southern California [5][10]:

The Raymond Basin was first adjudicated in 1943, with the judgment modified and restated in 1984. The judgment specifies pumping rights, provides for 10 percent over-pumping to be made up the following year, and for 10 percent carryover of unpumped rights for one year.

Total storage in the Raymond Basin is 1.37 million AF with an unused storage space of about 570,000 AF. Only 250,000 AF of that unused storage space, the Raymond Basin Management

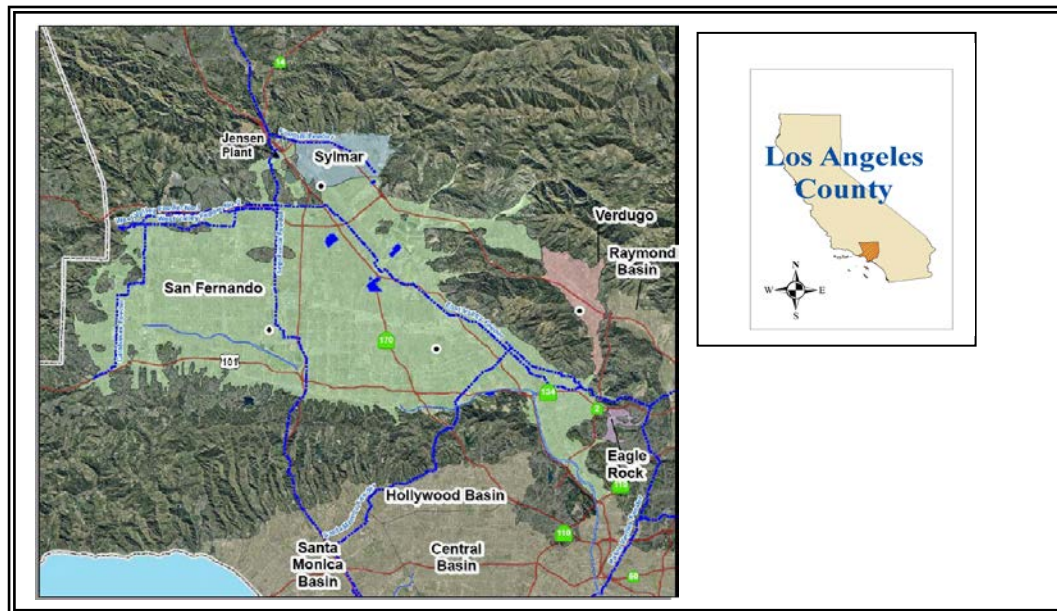
Board (RBMB) estimates, would be available for storage programs or Long Term Storage Accounts. Individual parties may also enter into a Long Term Storage Account to add or extract groundwater during the year subject to the RBMB adopted Groundwater Storage Policies. There is currently an injection capacity of about 8,000 AFY and a spreading capacity of about 23,000 AFY in the Pasadena subarea, the largest of the three subareas of Raymond Basin. Total average Metropolitan firm demands in 2020 for member agencies within the Raymond Basin are about 31,000 AFY, up to 33,000 AFY by 2030. No imported water has been used for groundwater replenishment in recent years, though small quantities have been injected for blending purposes.

In Phase 1, of the 31,000 AFY of Metropolitan demand, it is assumed that the City of Pasadena needs about 10,000 AFY for blending purposes, which limits the amount of recycled water that Pasadena and San Marino could offset to about 21,000 AFY. Because water levels are declining in the Raymond Basin, it is likely that Pasadena would be more interested in supplemental recharge. Therefore, about 85 percent of the offset amount of 21,000 AFY, or 18,000 AFY, could be stored and extracted.

With the 75 percent blending requirement from DPH for injection and spreading, the ability to store and extract recycled water from LACSD would be about 15,000 AFY by 2020 (Phase 1). After 5-10 years of operation, it is assumed that 100 percent recycled water could be stored in the Raymond Basin, so about 18,000 AFY could be stored by 2030 (Phase 2).

Some caution is warranted in developing a major storage and extraction program in Raymond Basin. A Superfund clean-up of perchlorate is underway at the NASA Jet Propulsion Laboratory (JPL) in the northwestern portion of the basin (Monk hill sub-area in Foothill MWD's service area). Substantial perchlorate contamination has also impacted production to the south of JPL in Pasadena's service area and shut down nine wells. JPL has maintained that this perchlorate has other sources and is not an extension of the contamination from their site. Pasadena is seeking Prop. 50 funds for remediation infrastructure.

## Upper Los Angeles River Basin



### Adjudication Summary

According to The Metropolitan Water District of Southern California [3]:

“The judgment distinguishes the San Fernando, Sylmar, Verdugo and Eagle Rock basins, finds them to be separate basins and sets out separate and distinct rights within each basin. The judgment sets out the separate conditions of the basins with respect to overdraft and safe yield and sets out the rights of the parties to surface and groundwater. Judgment expressly recognizes stored water – imported or reclaimed water that is intentionally spread or safe yield water that is stored in-lieu and provides for separate accounting and recapture subject to specific requirements. Judgment provides for appointment of a watermaster and specifies powers and duties of the watermaster. Judgment establishes an administrative committee.”

The following is taken from the Upper Los Angeles River Area (ULARA) website [13] and The Metropolitan Water District of Southern California [9][10]:

Water rights in ULARA were first established by the ‘Judgment After Trial By Court’ in Superior Court Case No. 650079, entitled *The City of Los Angeles, Plaintiff vs. City of San Fernando, et al, Defendant*. signed March 14, 1968, by the Honorable Edmund M. Moor, Judge of the Superior Court of Los Angeles County.

Numerous pretrial conferences were held subsequent to the filing of the action by the City of Los Angeles in 1955 and before the trial commenced on March 1, 1966. On March 19, 1958, an Interim Order of Reference was entered by the Court directing the State Water Rights Board (now known as the State Water Resources Control Board) to study the availability of all public and private records, documents, reports, and data relating to a proposed order of reference in the case. The Court subsequently entered an Order of Reference to State Water Rights Board to Investigate and Report upon the Physical Facts (Section 2001, Water Code) on June 11, 1958.

A final Report of Referee was approved on July 27, 1962 and filed with the Court. The Report of Referee made a complete study of the hydrogeology of ULARA, insofar as it affects the occurrence and movement of groundwater and surface water of the area. In addition, investigations were made of the history of channels of the Los Angeles River and its tributaries; the areas, limits, and directions of flow of all groundwater within the area; the historic extractions of groundwater in the basin and their quality; and all sources of water entering and leaving ULARA. The Report of Referee served as the principal basis for geologic and hydrologic facts for the original Trial Court Judgment in 1968, the Decision of the California Supreme Court in 1975 (14 Cal 3d 199, 123 Cal Rept 1), and the Trial Court Final Judgment on remand on January 26, 1979.

The Trial Court issued its opinion on March 15, 1968. The City of Los Angeles filed an appeal with the California Court of Appeal, which held a hearing on November 9, 1972, and issued its opinion on November 22, 1972. The opinion, prepared by Judge Compton and concurred in by Judges Roth and Fleming, reversed, with direction, the original judgment handed down by Judge Moor. In essence, the City of Los Angeles was given rights to all water in ULARA, including the use of the underground basins with some limited entitlements to others. The defendants, however, were given the right to capture “return water”, which is water served to their customers that percolates back into the groundwater basin (see below).

A petition for rehearing was filed by the defendants on December 7, 1972, but was denied by the California Court of Appeal. On January 2, 1973, the defendants filed a petition for hearing with the California Supreme Court. On March 2, 1973 the California Supreme Court advised the parties it would hear the case. The hearing began on January 14, 1975.

On May 12, 1975, the California Supreme Court filed its opinion on the 20-year San Fernando Valley water litigation. This opinion, which became final on August 1, 1975, upheld the Pueblo Water Right of the City of Los Angeles to all groundwater in the San Fernando Basin (SFB) derived from precipitation within ULARA. The City of Los Angeles’ Pueblo Water Right was not allowed to extend to the groundwaters of the Sylmar and Verdugo Basins. However, all surface and groundwater underflows from these basins are part of Los Angeles’ Pueblo Water Right.

In addition, the City of Los Angeles was given a right to all SFB groundwater derived from “return water” imported by it from outside ULARA and either spread or delivered within the SFB. The Cities of Glendale and Burbank were also given rights to all SFB groundwater derived from “return water” that each imports from outside ULARA and delivered within ULARA. San Fernando was not a member of Metropolitan until the end of 1971, and had never prior thereto

imported any water from outside ULARA. Therefore, San Fernando has no right to capture “return water” in the SFB.

In effect, the California Supreme Court reversed the principal decision of the Trial Court, and remanded the case back to the Superior Court for further proceedings consistent with the Supreme Court's opinion. On remand, the case was assigned to the Honorable Harry L. Hupp, Judge of the Superior Court of Los Angeles County.

The Final Judgment (Judgment), signed by Judge Hupp, was entered on January 26, 1979. The water rights set forth in the Judgment are consistent with the opinion of the California Supreme Court described above. The Judgment includes provisions and stipulations regarding water rights; the calculation of imported return water credit; storage of water; stored water credit; and arrangements for physical solution water for certain parties as recommended by the California Supreme Court.

The Judgment also provides for a court-appointed Watermaster to enforce the Judgment. In addition, the Judgment formed an Administrative Committee consisting of one voting member from each of the following five municipal water agencies: Los Angeles, Glendale, Burbank, San Fernando, and the Crescenta Valley Water District. The purpose of the Administrative Committee is to “...advise with, request or consent to, and review actions of the Watermaster.”

Copies of the Judgment are available from the ULARA Watermaster Office.

A separate stipulation was filed in Superior Court on January 26, 1979, appointing Melvin L. Blevins as Watermaster. On September 1, 2003, Mark G. Mackowski was appointed Watermaster following the resignation of Mr. Blevins.

The following table lists the judges who have succeeded Judge Hupp as Judge of Record for the San Fernando Judgment.

#### JUDGES OF RECORD

Judge	Date Appointed
Susan Bryant-Deason	January 1, 1999
Ricardo A. Torres	January 1, 1993
Gary Klausner	December 9, 1991
Jerold A. Krieger	April 16, 1991
Sally Disco	May 25, 1990
Miriam Vogel	January 16, 1990
Vernon G. Foster	April 30, 1985

## References

- [1] CBMWD. “Central Basin Municipal Water District.” Accessed October 30, 2014 from:  
<http://www.centralbasin.org/en/>.
- [2] “Main San Gabriel Basin Watermaster.” 2013. Accessed October 30, 2014 from:  
<http://www.watermaster.org/>.
- [3] Metropolitan Water District of Southern California. 2007a. “Summary of Groundwater Basin Management.” *Groundwater Assessment Study*. Accessed October 30, 2014 from:  
<http://www.mwdh2o.com/mwdh2o/pages/yourwater/supply/groundwater/PDFs/FINALAppendixB.pdf>
- [4] ———. 2007b. “Chapter IV – Groundwater Basin Reports San Gabriel Valley Basins – Six Basins .” *Groundwater Assessment Study*. Accessed October 30, 2014 from:  
<http://www.mwdh2o.com/mwdh2o/pages/yourwater/supply/groundwater/PDFs/SanGabrielValleyBasins/SixBasins.pdf>.
- [5] ———. 2007c. “Chapter IV – Groundwater Basin Reports San Gabriel Valley Basins - Raymond Basin.” *Groundwater Assessment Study*. Accessed October 30, 2014 from:  
<http://www.mwdh2o.com/mwdh2o/pages/yourwater/supply/groundwater/PDFs/SanGabrielValleyBasins/RaymondBasin.pdf>.
- [6] ———. 2007d. “Chapter IV – Groundwater Basin Reports San Gabriel Valley Basins - Main San Gabriel and Puente Basins.” *Groundwater Assessment Study*. Accessed October 30, 2014 from:  
<http://www.mwdh2o.com/mwdh2o/pages/yourwater/supply/groundwater/PDFs/SanGabrielValleyBasins/SanGabrielandPuenteBasins.pdf>.
- [7] ———. 2007e. “Chapter IV – Groundwater Basin Reports Los Angeles County Coastal Plain Basins – West Coast Basin.” *Groundwater Assessment Study*. Accessed October 30, 2014 from:  
<http://www.mwdh2o.com/mwdh2o/pages/yourwater/supply/groundwater/PDFs/LACountyCoastalPlainBasins/WestCoastBasin.pdf>.
- [8] ———. 2007f. “Chapter IV – Groundwater Basin Reports Los Angeles County Coastal Plain Basins – Central Basin.” *Groundwater Assessment Study*. Accessed October 30, 2014 from:  
<http://www.mwdh2o.com/mwdh2o/pages/yourwater/supply/groundwater/PDFs/LACountyCoastalPlainBasins/CentralBasin.pdf>.
- [9] ———. 2007g. “Chapter IV – Groundwater Basin Reports San Fernando Valley Basins - Upper Los Angeles River Area Basins.” Accessed October 30, 2014 from:  
<http://www.mwdh2o.com/mwdh2o/pages/yourwater/supply/groundwater/PDFs/SanFernandoValleyBasins/UpperLARiverAreaBasins.pdf>.

- [10] ———. 2007h. “A Status Report on the Use of Groundwater in the Service Area of the Metropolitan Water District of Southern California.” *Groundwater Assessment Study*. Accessed October 30, 2014 from: <http://www.mwdh2o.com/mwdh2o/pages/yourwater/supply/groundwater/GWAS.html>.
- [11] Reichard, E.G, S.M. Crawford, R.R. Everett, D.J Ponti, T.A Johnson, T Nishikawa, M Land, et al. 2003. *Geohydrology, Geochemistry, and Ground-Water Simulation-Optimization of the Central and West Coast Basins, Los Angeles County, California*. Water Resources Investigations 03-4065. Los Angeles, California. Accessed October 30, 2014 from: <http://pubs.usgs.gov/wri/wrir034065/wrir034065.html>.
- [12] Superior Court of the State of California for the County of Los Angeles. 2009. Notice of Motion and Motion to Amend and Restate Judgment; Memorandum of Points and Authorities in Support Thereof.
- [13] ULARA. 2014. “Upper Los Angeles River Adjudication .” *History of ULARA Adjudication*. Accessed October 30, 2014 from: [http://ularawatermaster.com/index.html?page\\_id=911](http://ularawatermaster.com/index.html?page_id=911).
- [14] Warne, William E. 1961. *Planned Utilization of the Ground Water Basins of the Coastal Plain of Los Angeles County* Bulletin 104 Appendix A Ground Water Geology. State of California Department of Water Resources. Accessed October 30, 2014 from: [http://www.water.ca.gov/waterdatalibrary/docs/historic/Bulletins/Bulletin\\_104/Bulletin\\_104-A\\_1961.pdf](http://www.water.ca.gov/waterdatalibrary/docs/historic/Bulletins/Bulletin_104/Bulletin_104-A_1961.pdf).
- [15] “West Basin Municipal Water District.” Accessed October 30, 2014 from: <http://www.westbasin.org/>.
- [16] “WRD Technical Bulletin Volume 4, Summer 2005.” 2014. *An Introduction to the Central and West Coast Groundwater Basins*. Accessed October 30, 2014 from: <http://www.wrd.org/engineering/introduction-groundwater-basins-los-angeles.php>.
- [17] WRDSC. 2014. “Water Replenishment District of Southern California.” Accessed October 30, 2014 from: <http://www.wrd.org/>.

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Superior Court of California  
County of Los Angeles

DEC 23 2013

Sherri R. Carter, Executive Officer/Clerk  
By Marisela Fragoso, Deputy

8 SUPERIOR COURT OF THE STATE OF CALIFORNIA  
9 FOR THE COUNTY OF LOS ANGELES

10 CENTRAL AND WEST BASIN WATER  
11 REPLENISHMENT DISTRICT, etc.,

12 Plaintiff,

13 vs.

14 CHARLES E. ADAMS, et al.,

15 Defendant

16  
17 CITY OF LAKEWOOD, a municipal  
corporation,

18 Cross-Complainant

19 vs.

20 CHARLES E. ADAMS, et al.,

21 Cross-Defendants.

Case No.: 786,656

THIRD AMENDED JUDGMENT

(Declaring and establishing  
water rights in Central Basin,  
enjoining extractions  
therefrom in excess of  
specified quantities  
and providing for the storage and  
extraction of stored water.)

Assigned for all purposes to  
Hon. Abraham Khan  
Dept. 51

## TABLE OF CONTENTS

I.	DECLARATION AND DETERMINATION OF WATER RIGHTS OF PARTIES; RESTRICTION ON THE EXERCISE THEREOF.....	13
A.	Determination of Rights of Parties. ....	13
B.	Parties Enjoined as to Quantities of Extractions.....	14
C.	Parties Enjoined as to Export of Extractions. ....	17
II.	APPOINTMENT OF WATERMASTER; WATERMASTER ADMINISTRATION PROVISIONS.....	17
A.	The Administrative Body.....	18
(1)	To Require Reports, Information and Records. ....	18
(2)	Storage Projects. ....	18
(3)	Annual Report. ....	18
(4)	Annual Budget and Appeal Procedure in Relation Thereto.....	19
(5)	Rules. ....	22
B.	The Central Basin Water Rights Panel. ....	22
C.	The Storage Panel. ....	26
D.	Use of Facilities and Data Collected by Other Governmental Agencies.....	26
E.	Appeal from Watermaster Decisions. ....	26
F.	Effect of Non-Compliance by Watermaster With Time Provisions. ....	27
G.	Limitations on Administrative Body. ....	27
H.	Regional Disadvantaged Communities Incentive Program. ....	28
III.	PROVISIONS FOR PHYSICAL SOLUTION TO MEET THE WATER REQUIREMENTS IN CENTRAL BASIN. ....	29
A.	Carryover of Portion of Allowed Pumping Allocation.....	29
(1)	Amount of Carryover. ....	29
(2)	Conversion of Carryover to Stored Water. ....	30
(3)	Declared Water Emergency. ....	30

1	(4)	Drought Carryover. ....	31
2	(5)	Accumulated Drought Carryover. ....	31
3	B.	When Over-Extractions May be Permitted. ....	31
4	(1)	Underestimation of Requirements for Water. ....	32
5	(2)	Reductions in Allowed Pumping Allocations in Succeeding	
6		Years to Compensate for Permissible Overextractions. ....	32
7	(3)	Reductions in Allowed Pumping Allocations for the Next	
8		Succeeding Administrative Year to Compensate for Overpumping. ....	32
9	(4)	Reports of Certain Over-extractions to the Court. ....	33
10	(5)	Effect of Over-extractions on Rights. ....	33
11	(6)	Pumping Under Agreement With Plaintiff During	
12		Periods of Emergency. ....	33
13	(7)	Exemption for Extractors of Contaminated Groundwater. ....	39
14	C.	Exchange Pool Provisions. ....	42
15	(1)	Definitions. ....	42
16	(2)	Parties Who May Purchase Water Through the Exchange Pool. ....	43
17	(3)	Procedure for Purchasing Exchange Pool Water. ....	43
18	(4)	Subscriptions to Exchange Pool. ....	44
19	(5)	Limitations on Purchases of Exchange Pool Water and Allocation of	
20		Requests to Purchase Exchange Pool Water Among Exchangors. ....	46
21	(6)	Additional Voluntary Subscriptions. ....	48
22	(7)	Effect if Category (a) Requests Exceed Available Subscriptions, Both	
23		Required and Voluntary. ....	48
24	(8)	Additional Pumping by Exchangees Pursuant to	
25		Exchange Pool Provisions. ....	49
26	(9)	Reduction in Pumping by Exchangors. ....	49
27	(10)	Price to be Paid for Exchange Pool Water. ....	49
28	(11)	Carry-over of Exchange Pool Purchases by Exchangees. ....	50

1	(12) Notification by Watermaster to Exchangors and	
2	Exchangees of Exchange Pool Requests and Allocations	
3	Thereof and Price of Exchange Pool Water.....	51
4	(13) Payment by Exchangees. ....	52
5	(14) Payments to Exchangors. ....	52
6	(15) Delinquent Payments. ....	52
7	IV. PROVISIONS FOR THE STORAGE OF WATER AND	
8	THE EXTRACTION OF STORED WATER.....	53
9	A. Adjudication of Available Dewatered Space, Storage Capacity and Storage	
10	Apportionment. ....	53
11	B. Avoidance of Material Physical Harm.....	53
12	C. Apportionment of Available Dewatered Space. ....	54
13	D. Individual Storage Allocation. ....	55
14	E. Community Storage; Regional Disadvantaged Communities Incentive Program.....	55
15	F. Limit on Storage. ....	57
16	G. Extractions of Stored Water; Exemption from Replenishment Assessment. ....	58
17	H. Storage Procedure. ....	58
18	I. Loss of Stored Water/Relative Priority.....	59
19	J. Limits on Extraction. ....	59
20	K. Increased Extractions in the Central Basin for Certain Water Purveyors.....	60
21	L. Special Provisions for Temporary Storage within Community Storage Pool. ....	61
22	M. Basin Operating Reserve.....	63
23	(1) Participating Parties. ....	66
24	(2) Determination of Additional Extraction Rights.....	66
25	(3) Increase in Extraction Rights. ....	67
26	(4) Nominal Fluctuations.....	67
27	(5) Availability of New Water.....	67
28	(6) Limitation.....	68

1	O.	Limits on Watermaster Review. ....	68
2	P.	Hearing Process For Watermaster Review. ....	69
3	Q.	Trial Court Review .....	69
4	R.	Space Available Storage, Relative Priority, and Dedication of “Spilled” Water. ....	70
5	V.	CONTINUING JURISDICTION OF THE COURT. ....	72
6	VI.	GENERAL PROVISIONS.....	74
7	A.	Judgment Constitutes Inter Se Adjudication.....	74
8	B.	Assignment, Transfer, Etc., of Rights.....	74
9	C.	Service Upon and Delivery to Parties of Various Papers. ....	74
10	D.	Judgment Does Not Affect Rights, Powers, Etc., of Plaintiff District.....	75
11	E.	Continuation of Order under Interim Agreement. ....	75
12	F.	Effect of Extractions by Exchangees; Reductions in Extractions.....	75
13	G.	Judgment Binding on Successors, Etc. ....	76
14	H.	Costs.....	76
15	I.	Intervention of Successors in Interest and New Parties.....	76
16	J.	Effect of this Amended Judgment on Orders Filed Herein.....	76

1 The original judgment in this action was entered on or about August 27, 1965. Pursuant  
2 to the reserved and continuing jurisdiction of the court under the Judgment herein, certain  
3 amendments to said Judgment and temporary orders have heretofore been made and entered.  
4 Continuing jurisdiction of the court for this action is currently assigned to Hon. Abraham Khan.

5 The Motion of Plaintiff WATER REPLENISHMENT DISTRICT OF SOUTHERN  
6 CALIFORNIA (which originally brought this action under its former name “Central and West  
7 Basin Water Replenishment District”), and of defendants, City of Lakewood, City of Long  
8 Beach, Golden State Water Company, California Water Service Company, City of Los Angeles,  
9 City of Cerritos, City of Downey, City of Signal Hill, Pico Water District, Bellflower-Somerset  
10 Mutual Water Company, LaHabra Heights County Water District, City of Norwalk, Orchard  
11 Dale Water District, Montebello Land & Water Company, South Montebello Irrigation District,  
12 Sativa Los Angeles County Water District, City of Vernon and Central Basin Municipal Water  
13 District (“Moving Parties”) herein for further amendments to the Judgment, notice thereof and of  
14 the hearing thereon having been duly and regularly given to all parties, came on for hearing in  
15 Department 51 of the above-entitled court on December 18, 2013 at 9:00 a.m. before said Hon.  
16 Abraham Khan. This “Third Amended Judgment” incorporates amendments and orders  
17 heretofore made to the extent presently operable and amendments pursuant to said last  
18 mentioned motion. To the extent this Amended Judgment is a restatement of the Judgment as  
19 heretofore amended, it is for convenience in incorporating all matters in one document, is not a  
20 readjudication of such matters and is not intended to reopen any such matters. As used  
21 hereinafter the word “Judgment” shall include the original Judgment entered in this action as  
22 amended to date, including this Third Amended Judgment.

23 There exists in the County of Los Angeles, State of California, an underground water  
24 basin or reservoir known and hereinafter referred to as the “Central Basin” or “Basin” described  
25 in Appendix “1” to this Judgment.

26 Within this Judgment, the following terms, words, phrases and clauses are used by the  
27 Court with the following meanings:

28 “Adjudicated Storage Capacity” means 220,000 acre-feet of the Available Dewatered

1 Space which has been apportioned herein for Individual Storage Accounts and Community  
2 Storage.

3 “Administrative Body” is defined in Section II(A).

4 “Administrative Year” means the twelve (12) month period beginning July 1 and ending  
5 June 30.

6 “Allowed Pumping Allocation” is that quantity in acre feet which the Court adjudges to  
7 be the maximum quantity which a party should be allowed to extract annually from Central  
8 Basin as set forth in Part I hereof, which constitutes 80% of such party’s Total Water Right.

9 “Allowed Pumping Allocation for a particular Administrative Year” and “Allowed  
10 Pumping Allocation in the following Administrative Year” and similar clauses, mean the  
11 Allowed Pumping Allocation as increased in a particular Administrative Year by any authorized  
12 carryovers pursuant to Section III(A) of this Judgment and as reduced by reason of any over-  
13 extractions in a previous Administrative Year.

14 “Artificial Replenishment” is the replenishment of Central Basin achieved through the  
15 spreading or injection of imported or recycled water for percolation thereof into Central Basin by  
16 a governmental agency, including WRD.

17 “Artificial Replenishment Water” means water captured or procured by WRD to  
18 replenish the Basin, either directly by percolating or injecting the water into the Basin, or  
19 through in lieu replenishment by substituting surface water (or payment therefor) in lieu of  
20 production and use of groundwater.

21 “Available Dewatered Space” means the total amount of space available to hold  
22 groundwater within the Central Basin without causing Material Physical Harm, which space is  
23 allocated between Adjudicated Storage Capacity and Basin Operating Reserve.

24 “Base Water Right” is the highest continuous extractions of water by a party from Central  
25 Basin for a beneficial use in any period of five consecutive years after the commencement of  
26 overdraft in Central Basin and prior to the commencement of this action, as to which there has  
27 been no cessation of use by that party during any subsequent period of five consecutive years.  
28 As employed in the above definition, the words “extractions of water by a party” and “cessation

of use by that party” include such extractions and cessations by any predecessor or predecessors in interest.

“Basin Operating Reserve” means a total of 110,000 acre feet of Available Dewatered Space available for Basin operations as provided in Section IV(L). The Basin Operating Reserve added to the Adjudicated Storage Capacity equals the amount of Available Dewatered Space.

“Calendar Year” is the twelve month period commencing January 1 of each year and ending December 31 of each year.

“Carryover” is defined in Section III(A).

“Carryover Conversion” means the process of transferring water properly held as Carryover into Stored Water, or the water so converted to Stored Water.

“Central Basin” is the underground basin or reservoir underlying the Central Basin Area, the exterior boundaries of which Central Basin are the same as the exterior boundaries of Central Basin Area.

“Central Basin Area” is the territory described in Appendix “1” to this Judgment and is a segment of the territory comprising Plaintiff District.

“Central Basin Water Rights Panel” means the constituent body of Watermaster consisting of seven (7) Parties elected from among parties holding Allowed Pumping Allocations as provided in Section II(B).

“CEQA” refers to the California Environmental Quality Act, Public Resources Code §§ 21000 *et seq.*

“Community Storage Pool” is defined in Section IV(E).

“Declared Water Emergency” means a period commencing with the adoption of a resolution of the Board of Directors of WRD declaring that conditions within the Central Basin relating to natural and imported supplies of water are such that, without implementation of the water emergency provisions of this Judgment, the water resources of the Central Basin risk degradation. Such Declaration may be made as provided in Section III(A)(3).

“Disadvantaged Community” means any area that is served by a Water Purveyor and that consists of one or more contiguous census tracts which, based upon the most-recent United

1 States Census data, demonstrates a median household income which is less than eighty percent  
2 (80%) of the median household income for all Census Tracts within the state of California. The  
3 identification of Disadvantaged Communities shall be made by Watermaster following each  
4 decennial census.

5 “Extraction,” “extractions,” “extracting,” “extracted,” and other variations of the same  
6 noun and verb, mean pumping, taking, diverting or withdrawing groundwater by any manner or  
7 means whatsoever from Central Basin.

8 “Imported Water” means water brought into Central Basin Area from a non-tributary  
9 source by a party and any predecessors in interest, either through purchase directly from  
10 Metropolitan Water District of Southern California (“MWD”), the Central Basin Municipal  
11 Water District (“CBMWD”), or any other MWD member agency and additionally, as to the  
12 Department of Water and Power of the City of Los Angeles, water brought into the Central Basin  
13 Area by that party by means of the Owens River Aqueduct. In the case of water imported for  
14 storage by a party pursuant to this Judgment, “Imported Water” means water brought into the  
15 Central Basin from any non-tributary source as one method for establishing storage in the  
16 Central Basin.

17 “Imported Water Use Credit” is the annual amount, computed on a calendar year basis, of  
18 Imported Water which any party and any predecessors in interest, who have timely made the  
19 required filings under Water Code Section 1005.1, have imported into Central Basin Area in any  
20 calendar year and subsequent to July 9, 1951, for beneficial use therein, but not exceeding the  
21 amount by which that party and any predecessors in interest reduces his or their extractions of  
22 groundwater from Central Basin in that calendar year from the level of his or their extractions in  
23 the preceding calendar year, or in any prior calendar year not earlier than the calendar year 1950,  
24 whichever is the greater.

25 “Individual Storage Allocation” is defined in Section IV(D).

26 “Majority Protest” means a written protest filed with the Administrative Body of  
27 Watermaster within sixty (60) days following a protested event or decision, which evidences the  
28 concurrence of a majority of the Allowed Pumping Allocations held within the Basin as of the

1 date thereof.

2       “Material Physical Harm” means material physical injury or a material diminution in the  
3 quality or quantity of groundwater available within the Basin to support extraction of Total  
4 Water Rights or Stored Water, that is demonstrated to be attributable to the placement, recharge,  
5 injection, storage or recapture of Stored Water in the Central Basin, including, but not limited to,  
6 degradation of water quality, liquefaction, land subsidence and other material physical injury  
7 caused by elevated or lowered groundwater levels. Material Physical Harm does not include  
8 “economic injury” that results from other than direct physical causes, including any adverse  
9 effect on water rates, lease rates, or demand for water. Once fully mitigated, physical injury  
10 shall no longer be considered to be material.

11       “Natural Replenishment” means and includes all processes other than “Artificial  
12 Replenishment” by which water may become a part of the groundwater supply of Central Basin.

13       “Natural Safe Yield” is the maximum quantity of groundwater, not in excess of the long  
14 term average annual quantity of Natural Replenishment, which may be extracted annually from  
15 Central Basin without eventual depletion thereof or without otherwise causing eventual  
16 permanent damage to Central Basin as a source of groundwater for beneficial use, said maximum  
17 quantity being determined without reference to Artificial Replenishment.

18       “Outgoing Watermaster” is the State of California, Department of Water Resources, the  
19 Watermaster appointed pursuant to the terms of the Judgment before this Third Amendment.

20       “Overdraft” is that condition of a groundwater basin resulting from extractions in any  
21 given annual period or periods in excess of the long term average annual quantity of Natural  
22 Replenishment, or in excess of that quantity which may be extracted annually without otherwise  
23 causing eventual permanent damage to the basin.

24       “Party” means a party to this action. Whenever the term “party” is used in connection  
25 with a quantitative water right, or any quantitative right, privilege or obligation, or in connection  
26 with the assessment for the budget of the Watermaster, it shall be deemed to refer collectively to  
27 those parties to whom are attributed a Total Water Right in Part I of this Judgment.

28       “Person” or “persons” include individuals, partnerships, associations, governmental

1 agencies and corporations, and any and all types of entities.

2 “Recycled Water” means water that has been reclaimed through treatment appropriate for  
3 its intended use in compliance with applicable regulations.

4 “Regional Disadvantaged Communities Incentive Program” means a program to be  
5 developed by Watermaster in the manner provided in Section II(H) of this Judgment, and  
6 approved by the Court, whereby a portion of the Community Storage Pool is made available to  
7 or for the benefit of Disadvantaged Communities, on a priority basis within the Central Basin.

8 “Replenishment Assessment” means the replenishment assessment imposed by WRD  
9 upon each acre-foot of groundwater extracted from the Central Basin pursuant to WRD’s  
10 enabling act, California Water Code §§ 60000 et seq.

11 “Small Water Producers Group” means a body consisting of parties holding no greater  
12 than 5,000 acre-feet of Allowed Pumping Allocation, as set forth on Appendix 3 hereto and as  
13 may be modified from time to time by the Group’s own procedures and the requirements set  
14 forth in Appendix 3.

15 “Storage Panel” or “Central Basin Storage Panel” means a bicameral constituent body of  
16 Watermaster consisting of (i) the Central Basin Water Rights Panel and (ii) the Board of  
17 Directors of WRD.

18 “Storage Project” means an activity pertaining to the placement, recharge, injection,  
19 storage, transfer, or recapture of Stored Water within the Basin, but does not include actions by  
20 WRD undertaken in connection with its replenishment activities.

21 “Stored Water” means water, including Recycled Water, held within Available  
22 Dewatered Space as a result of spreading, injection, in-lieu delivery, or Carryover Conversion,  
23 where there is an intention to subsequently withdraw the water for reasonable and beneficial use  
24 pursuant to this Judgment.

25 “Total Water Right” is the quantity arrived at in the same manner as in the computation  
26 of “Base Water Right,” but including as if extracted in any particular year the Imported Water  
27 Use Credit, if any, to which a particular party may be entitled.

28 “Water” includes only non-saline water, which is that having less than 1,000 parts of

1 chlorides to 1,000,000 parts of water.

2 “Water Augmentation Project” means pre-approved physical actions and management  
3 activities that provide demonstrated appreciable increases in long-term annual groundwater yield  
4 in the Basin that are initiated as provided in this Judgment after January 1, 2013.

5 “Water Purveyor” means a Party (and successors in interest) which sells water to the  
6 public, whether a regulated public utility, mutual water company or public entity. As that term is  
7 used in Section III(B)(6), “Water Purveyor,” in addition to the foregoing, means a Party which  
8 has a connection or connections for the taking of Imported Water through the Metropolitan  
9 Water District of Southern California (“MWD”), or through a MWD-member agency, or access  
10 to such Imported Water through such connection, and which normally supplies at least a part of  
11 its customers’ water needs with such Imported Water.

12 “Watermaster” is defined in Part II and is comprised of (i) the Administrative Body, (ii)  
13 the Central Basin Water Rights Panel, and (iii) the Central Basin Storage Panel. Watermaster,  
14 and the various constituent bodies of Watermaster, as designated in this Judgment, exist as a  
15 special master pursuant to this Judgment and Watermaster serves at the pleasure of the Court.  
16 Nothing herein shall be construed as creating an independent designation of “Watermaster” as a  
17 public agency subject to the provisions of CEQA, nor does membership or participation as the  
18 designated Watermaster expand any statutory, constitutional, or other powers of the members  
19 serving as part of the Watermaster.

20 “West Coast Basin” is the groundwater basin adjacent to the Central Basin which is the  
21 subject of a separate adjudication of groundwater rights in *California Water Service Company, et*  
22 *al. v. City of Compton, et al.*, Los Angeles Superior Court Case No. 506806.

23 “WRD” or “Water Replenishment District” is the plaintiff herein, the Water  
24 Replenishment District of Southern California, a special district of the State of California, which  
25 brought this action under its former name, “Central and West Basin Water Replenishment  
26 District.”

27 In those instances where any of the above-defined words, terms, phrases or clauses are  
28 utilized in the definition of any of the other above-defined words, terms, phrases and clauses,

1 such use is with the same meaning as is above set forth.

2  
3 NOW THEREFORE, IT IS ORDERED, DECLARED, ADJUDGED AND DECREED  
4 WITH RESPECT TO THE ACTION AND CROSS-ACTION AS FOLLOWS:

5  
6 I. DECLARATION AND DETERMINATION OF WATER RIGHTS OF  
7 PARTIES; RESTRICTION ON THE EXERCISE THEREOF.<sup>1</sup>

8 A. Determination of Rights of Parties.

9 (1) Each party, except defendants The City of Los Angeles and  
10 Department of Water and Power of the City of Los Angeles, whose name is set  
11 forth in Appendix 2 and by this reference made a part hereof, and after whose  
12 name there appears under the column "Total Water Right" a figure other than "0,"  
13 is the owner of and has the right to extract annually groundwater from Central  
14 Basin for beneficial use in the quantity set forth after that party's name under said  
15 column "Total Water Right" as of the close of the Administrative Year ending  
16 June 30, 2012 in accordance with the Watermaster Reports on file with this Court  
17 and the records of the Plaintiff. This tabulation does not take into account  
18 additions or subtractions from any Allowed Pumping Allocation of a producer for  
19 the 2012-2013 Administrative Year, nor other adjustments not representing  
20 change in fee title to water rights, such as leases of water rights, nor does it  
21 include the names of lessees of landowners where the lessees are exercising the  
22 water rights. The exercise of all water rights is subject, however, to the  
23 provisions of this Judgment as hereinafter contained. All of said rights are of the  
24 same legal force and effect and are without priority with reference to each other.  
25 Each party whose name is set forth in the tabulation in Appendix "2" of this

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26  
27 <sup>1</sup> Headings in the Judgment are for purposes of reference and the language of said headings do not constitute, other  
28 than for such purpose, a portion of this Judgment.

1 Judgment, and after whose name there appears under the column “Total Water  
2 Right” the figure “0,” owns no rights to extract any groundwater from Central  
3 Basin, and has no right to extract any groundwater from Central Basin.

4 (2) Defendant The City of Los Angeles is the owner of the right to  
5 extract fifteen thousand (15,000) acre feet per annum of groundwater from  
6 Central Basin, but it has the right and ability to purchase or lease additional rights  
7 to extract groundwater and increase its Allowed Pumping Allocation. Defendant  
8 Department of Water and Power of the City of Los Angeles has no right to extract  
9 groundwater from Central Basin except insofar as it has the right, power, duty or  
10 obligation on behalf of defendant The City of Los Angeles to exercise the water  
11 rights in Central Basin of defendant The City of Los Angeles. The exercise of  
12 said rights is subject, however, to the provisions of this Judgment hereafter  
13 contained, including but not limited to, sharing with other parties in any  
14 subsequent decreases or increases in the quantity of extractions permitted from  
15 Central Basin, pursuant to continuing jurisdiction of the Court, on the basis that  
16 fifteen thousand (15,000) acre feet (and any increase in its Allowed Pumping  
17 Allocation) bears to the Allowed Pumping Allocations of the other parties.

18 (3) No party to this action is the owner of or has any right to extract  
19 groundwater from Central Basin except as herein affirmatively determined.

20 B. Parties Enjoined as to Quantities of Extractions.

21 (1) Each party, other than The State of California and The City of Los  
22 Angeles and Department of Water and Power of The City of Los Angeles, is  
23 enjoined and restrained in any Administrative Year commencing after the date  
24 this Judgment becomes final from extracting from Central Basin any quantity of  
25 Water greater than the party’s Allowed Pumping Allocation as hereinafter set  
26 forth next to the name of the party in the tabulation appearing in Appendix 2 at  
27 the end of this Judgment, subject to further provisions of this Judgment. Subject  
28 to such further provisions, the officials, agents and employees of The State of

1 California are enjoined and restrained in any such Administrative Year from  
2 extracting from Central Basin collectively any quantity of water greater than the  
3 Allowed Pumping Allocation of The State of California as hereinafter set forth  
4 next to the name of that party in the same tabulation. Each party adjudged and  
5 declared above not to be the owner of and not to have the right to extract  
6 groundwater from Central Basin is enjoined and restrained in any Administrative  
7 Year commencing after the date this Judgment becomes final from extracting any  
8 groundwater from Central Basin, except as may be hereinafter permitted to any  
9 such party under this Judgment.

10 (2) The total extraction right for each party includes a party's Allowed  
11 Pumping Allocation (to the extent not transferred by agreement or otherwise), any  
12 contractual right acquired through lease or other agreement to extract or use the  
13 rights of another party, and any right to extract Stored Water or Carryover as  
14 provided in this Judgment. No party may extract in excess of 140% of the sum of  
15 (i) the party's Allowed Pumping Allocation and (ii) the party's leased water,  
16 except upon prior approval by the applicable body of Watermaster as required  
17 pursuant to Section IV(J) as provided herein. Upon application, the body specified  
18 in Section IV(J) shall approve a party's request to extract water in excess of such  
19 limit, provided there is no Material Physical Harm. Requests to extract water in  
20 excess of such limit shall be reviewed and either approved or denied within thirty  
21 (30) days of such request.

22 (3) Defendant The City of Los Angeles is enjoined and restrained in  
23 any Administrative Year commencing after the date this Judgment becomes final  
24 from extracting from Central Basin any quantity of water greater than fifteen  
25 thousand (15,000) acre feet or its Allowed Pumping Allocation, as recognized by  
26 the Watermaster, if it acquires additional rights to pump groundwater through  
27 purchase or lease, subject to further provisions of this Judgment, including but not  
28 limited to, sharing with other parties in any subsequent decreases or increases in

1 the quantity of extractions permitted from Central Basin by parties, pursuant to  
2 continuing jurisdiction of the Court, on the basis that fifteen thousand (15,000)  
3 acre feet (or the adjusted Allowed Pumping Allocation if additional rights are  
4 acquired) bears to the Allowed Pumping Allocations of the other parties.  
5 Defendant Department of Water and Power of The City of Los Angeles is  
6 enjoined and restrained in any Administrative Year commencing after the date  
7 this Judgment becomes final from extracting from Central Basin any quantity of  
8 water other than such as it may extract on behalf of defendant The City of Los  
9 Angeles, and which extractions, along with any extractions by said City, shall not  
10 exceed that quantity permitted by this Judgment to that City in any Administrative  
11 Year. Whenever in this Judgment the term “Allowed Pumping Allocation”  
12 appears, it shall be deemed to mean as to defendant The City of Los Angeles the  
13 quantity of fifteen thousand (15,000) acre feet unless the City of Los Angeles has  
14 acquired through purchase or lease right to extract additional groundwater. The  
15 limit on extraction as provided in the preceding Section I(B)(1) shall also apply to  
16 The City of Los Angeles.

17 (4) Any rights decreed and adjudicated herein may be transferred,  
18 assigned, licensed or leased by the owner thereof provided, however, that no such  
19 transfer shall be complete until compliance with the appropriate notice procedures  
20 established by Watermaster.

21 (5) Unless a party elects otherwise, production of water from the Basin  
22 for the use or benefit of the parties hereto shall be counted against the party’s total  
23 extraction right in the following order: (i) Increased extractions by certain  
24 qualified water rights holders pursuant to Section IV(K), (ii) Exchange Pool  
25 production, (iii) production of Carryover water, (iv) production of leased water, ,  
26 (v) production of Allowed Pumping Allocation, (vi) production of Stored Water,  
27 (vii) production of Drought Carryover (according to Watermaster’s Rules), and  
28 (viii) production of water under an agreement with WRD during a period of

1 emergency pursuant to Section III(B)(6).

2 C. Parties Enjoined as to Export of Extractions.

3 Except as expressly authorized herein, or upon further order of the Court, all  
4 parties are enjoined and restrained from transporting water extracted from the Central  
5 Basin outside the boundaries of the Central Basin Area. For purposes of this Section,  
6 water supplied by a Water Purveyor to its customers located within any of its service  
7 areas contiguous to the Central Basin or within WRD's service area shall be exempt from  
8 the export prohibition of this Section provided that the Water Purveyor also provides  
9 water to a service area that overlies the Basin in whole or in part. The foregoing  
10 exemption is not made, nor is it related to, a determination of an underflow between the  
11 basins, a cost or benefit allocation, or any other factor relating to the allocation of the  
12 Replenishment Assessment by WRD. Further, this injunction and restriction does not  
13 apply to export of water that will take place pursuant to contractual obligations  
14 specifically identified on Appendix 4, nor does it apply to export of Stored Water not  
15 having its origin in Carryover Conversion. The export identified on Appendix 4 may  
16 continue to the extent that any such extraction does not violate any other provisions of  
17 this Judgment, provided however that no such export identified on Appendix 4 shall  
18 exceed 5,000 acre-feet in any Year.

19  
20 II. APPOINTMENT OF WATERMASTER; WATERMASTER ADMINISTRATION  
21 PROVISIONS.

22 The particular bodies specified below are, jointly, hereby appointed Watermaster,  
23 for an indefinite term, but subject to removal by the Court, to administer this Judgment. Such  
24 bodies, which together shall constitute the "Watermaster," shall have restricted powers, duties  
25 and responsibilities as specified herein, it being the court's intention that particular constituent  
26 bodies of Watermaster have only limited and specified powers over certain aspects of the  
27 administration of this Judgment. The Outgoing Watermaster will exercise reasonable diligence  
28 in the complete transition of Watermaster duties and responsibilities within a reasonable time

1 following entry of this order, and to make available to the new Watermaster all records  
2 concerning Watermaster activities. The chair of the Central Basin Water Rights Panel (defined  
3 below) shall thereafter represent the Watermaster before the Court.

4 A. The Administrative Body.

5 Plaintiff Water Replenishment District of Southern California (“WRD”) is  
6 appointed the Administrative Body of the Central Basin Watermaster (“Administrative  
7 Body”). In order to assist the Court in the administration of the provisions of this  
8 Judgment and to keep the Water Rights Panel and the Court fully advised in the  
9 premises, the Administrative Body shall have the following duties, powers and  
10 responsibilities:

11 (1) To Require Reports, Information and Records.

12 In consultation with the Water Rights Panel, the Administrative Body  
13 shall require the parties to furnish such reports, information and records as may be  
14 reasonably necessary to determine compliance or lack of compliance by any party  
15 with the provisions of this Judgment.

16 (2) Storage Projects.

17 The Administrative Body shall exercise such powers as may be  
18 specifically granted to it under this Judgment with regard to Stored Water.

19 (3) Annual Report.

20 The Administrative Body shall prepare, on or before the 15th day of the  
21 fourth month following the end of the preceding Administrative Year, an annual  
22 report for the consideration of the Water Rights Panel. The Chair of the Water  
23 Rights Panel shall submit to the Court either (1) the annual report prepared by the  
24 Administrative Body, following the adoption by the Water Rights Panel, or (2) an  
25 annual report separately prepared and adopted by the Water Rights Panel. The  
26 annual report prepared by the Administrative Body shall be limited to the  
27 following, unless otherwise required by the Court:

28 (a) Groundwater extractions

- 1 (b) Storage Accounts maintained by each party  
2 (c) Status of the Regional Disadvantaged Community  
3 Incentive Program, if approved by the Court  
4 (d) Exchange Pool operation  
5 (e) Use of Imported Water  
6 (f) Violations of this Judgment and corrective action taken by  
7 bodies of Watermaster having jurisdiction as provided in this  
8 Judgment  
9 (g) Change of ownership of Total Water Rights  
10 (h) Watermaster administration costs  
11 (i) Water spread or imported into the Basin  
12 (j) Water Augmentation Projects  
13 (k) Whether the Administrative Body has become aware of the  
14 development of a Material Physical Harm, or imminent threat of the  
15 development of a Material Physical Harm, as required pursuant to  
16 Section IV(B) of this Judgment  
17 (l) Other matters as agreed with the Water Rights Panel  
18 (m) Recommendations, if any.

19 In consultation with the Water Rights Panel, the Administrative Body shall  
20 provide reasonable notice to all parties of all material actions or determinations by  
21 Watermaster or any constituent body thereof, and as otherwise provided by this  
22 Third Amended Judgment.

23 (4) Annual Budget and Appeal Procedure in Relation Thereto.

24 By April 1 of each Administrative Year, the Administrative Body shall  
25 prepare a proposed administrative budget for the subsequent year stating the  
26 anticipated expense for performing the administrative functions specified in this  
27 Judgment (the “Administrative Budget”). The Administrative Body shall mail a  
28 copy of the proposed Administrative Budget to each of the Parties at least 60 days

1 before the beginning of each Administrative Year. The Administrative Budget  
2 mailed to the Parties shall provide sufficient detail in the Administrative Budget  
3 to demonstrate a separation in accounting between the Administrative Budget and  
4 WRD's Replenishment Assessment and operating budget. For the first  
5 Administrative Year of operation under this Third Amended Judgment, if the  
6 Administrative Body is unable to meet the above time requirement, the  
7 Administrative Body shall mail said copies as soon as possible. The first year the  
8 Administrative Budget is prepared, the amount of that budget shall not exceed an  
9 amount equal to fifty percent (50%) of the 2012-2013 charge for Watermaster  
10 service for the Central Basin collected from Parties by the California Department  
11 of Water Resources. At all times, the Administrative Body shall maintain a  
12 separation in accounting between the Administrative Budget and WRD's  
13 Replenishment Assessment and operating budget. All increases in future budgets  
14 for the Administrative Body above the amount set forth above shall be subject to  
15 approval by the Water Rights Panel following a public meeting to be held prior to  
16 the beginning of the Administrative Year, provided that the approved budget shall  
17 not be less than the amount of the first-year budget for the Administrative Body,  
18 except upon further order of the Court. Any administrative function by WRD  
19 already paid for by the Replenishment Assessment shall not be added as an  
20 expense in the Administrative Budget. Similarly, any expense paid for by the  
21 Administrative Budget shall not be added to WRD's operating budget, or  
22 otherwise added to the calculation of the Replenishment Assessment. While WRD  
23 may approve the proposed Administrative Budget at the same meeting in which  
24 WRD adopts its annual Replenishment Assessment or annual budget, the  
25 Administrative Body's budget shall be separate and distinct from the  
26 Replenishment Assessment imposed pursuant to Water Code §60317 and WRD's  
27 operating budget.

28 If approval by the Water Rights Panel is required pursuant to the

1 foregoing, the Water Rights Panel shall act upon the proposed budget within 15  
2 calendar days after the public meeting. If the Water Rights Panel does not  
3 approve the budget prior to such deadline, the matter may be appealed to the  
4 Court within sixty (60) days. If any Party hereto has any objection to the  
5 Administrative Budget, it shall present the same in writing to Watermaster within  
6 15 days after the date of mailing of said tentative budget by the Administrative  
7 Body. The Parties shall make the payments otherwise required of them to the  
8 Administrative Body even though an appeal of such budget may be pending.  
9 Upon any revision by the Court, the Administrative Body shall either remit to the  
10 Parties their pro rata portions of any reduction in the budget, or shall credit their  
11 accounts with respect to their budget assessments for the next ensuing  
12 Administrative Year, as the Court shall direct.

13 The amount of the Administrative Budget to be assessed to each party  
14 shall be determined as follows: If that portion of the final budget to be assessed to  
15 the Parties is equal to or less than \$20.00 per party then the cost shall be equally  
16 apportioned among the Parties. If that portion of the final budget to be assessed to  
17 Parties is greater than \$20.00 per party then each Party shall be assessed a  
18 minimum of \$20.00. The amount of revenue expected to be received through the  
19 foregoing minimum assessments shall be deducted from that portion of the final  
20 budget to be assessed to the Parties and the balance shall be assessed to the Parties  
21 having Allowed Pumping Allocation, such balance being divided among them  
22 proportionately in accordance with their respective Allowed Pumping Allocation.

23 Payment of the assessment provided for herein, subject to adjustment by  
24 the Court as provided, shall be made by each such party prior to beginning of the  
25 Administrative Year to which the assessment relates, or within 40 days after the  
26 mailing of the tentative budget, whichever is later. If such payment by any Party  
27 is not made on or before said date, the Administrative Body shall add a penalty of  
28 5% thereof to such party's statement. Payment required of any Party hereunder

1 may be enforced by execution issued out of the Court, or as may be provided by  
2 order hereinafter made by the Court, or by other proceedings by the Watermaster  
3 or by any Party on the Watermaster's behalf.

4 Any money unexpended at the end of any Administrative Year shall be  
5 applied to the budget of the next succeeding Administrative Year. The  
6 Administrative Body shall maintain no reserves.

7 Notwithstanding the above, no part of the budget of the Administrative  
8 Body shall be assessed to WRD or to any Party who has not extracted water from  
9 Central Basin for a period of two successive Administrative Years prior to the  
10 Administrative Year in which the tentative budget should be mailed by the  
11 Administrative Body under the provisions of this subparagraph (4).

12 (5) Rules.

13 The Administrative Body may adopt, and amend from time to time, rules  
14 consistent with this Judgment as may be reasonably necessary to carry out duties  
15 under the provisions of this Judgment within its particular area of responsibility.  
16 The Body shall adopt its first set of rules and procedures within three (3) months  
17 following entry of this Third Amended Judgment. The rules shall be effective on  
18 such date after the mailing thereof to the Parties as is specified by the Body, but  
19 not sooner than thirty (30) days after such mailing.

20 B. The Central Basin Water Rights Panel.

21 The Central Basin Water Rights Panel of the Central Basin Watermaster ("Water Rights  
22 Panel") shall consist of seven (7) members, each of which is a Party. The term of each member  
23 of the Panel, with the exception of the seat held by the Small Water Producers Group, as  
24 provided herein, shall be limited to four years. The Court will make the initial appointments to  
25 the Central Basin Water Rights Panel upon motion by Parties consistent with the categories set  
26 forth below at or about the time of entry of this Third Amended Judgment, and shall establish a  
27 procedure for the staggered terms of such members. Thereafter, elections of members of the  
28 Panel shall be held as provided herein. One (1) such member of the Water Rights Panel shall be

1 elected by vote of the Small Water Producers Group conducted in accordance with its own  
2 procedures, provided such Group, as of the date of the election, consists of at least five (5)  
3 members who are Water Purveyors. One (1) such member of the Water Rights Panel shall be  
4 elected by vote of Parties with Allowed Pumping Allocation of less than 5,000 acre-feet who are  
5 not members of the Small Water Producers Group or, if the Small Water Producers Group does  
6 not then qualify following a continuous six-month period of non-qualification as provided  
7 herein, then two (2) such members shall be so selected. One (1) such member of the Water  
8 Rights Panel shall be elected by vote of Parties with Allowed Pumping Allocation of at least  
9 5,000 acre-feet but less than 10,000 acre-feet. Three (3) such members of the Water Rights  
10 Panel shall be elected by vote of Parties with Allowed Pumping Allocation of 10,000 acre-feet or  
11 greater. One (1) such member of the Water Rights Panel shall be elected by a vote of all holders  
12 of Allowed Pumping Allocations, with each such holder being entitled to one vote, such member  
13 to be elected by a plurality of the votes cast, following a nomination procedure to be established  
14 in the Water Rights Panel's rules. In the event of a tie, the seventh member shall be determined  
15 as may be provided in the Water Rights Panel's rules, or otherwise by the court. Except as  
16 otherwise provided in this Section, each such rights holder shall have the right to cast a total  
17 number of votes equal to the number of acre-feet of its Allowed Pumping Allocation (rounded to  
18 the next highest whole number). With the exception of voting for the seventh member, Parties  
19 shall be entitled to vote only for candidates within the category(ies) that represent that Party's  
20 Allowed Pumping Allocation. For example, parties who are members of the Small Water  
21 Producers Group are entitled to vote only for the Small Water Producer Group member and the  
22 seventh member of the Water Rights Panel, and so on. Parties are not permitted to split votes.  
23 The results of such election shall be reported to the Court for confirmation of each member's  
24 appointment to the Water Rights Panel of Watermaster. The elected members of the Water  
25 Rights Panel shall be those candidates receiving the highest vote total in their respective  
26 categories. The Water Rights Panel shall hold its first meeting within thirty (30) days of the date  
27 this Third Amended Judgment becomes final. The Water Rights Panel shall develop rules for its  
28 operation consistent with this Judgment. The Water Rights Panel shall take action, including the

1 election of its Chair, by majority vote of its members. Election of the Chair shall occur every  
2 two years, with no Party serving as Chair for consecutive terms. Members of the Water Rights  
3 Panel shall serve without compensation. All references to Annual Pumping Allocation, as used  
4 herein, are as determined by the last published Watermaster report.

5 (1) The Water Rights Panel shall have the following duties and  
6 responsibilities:

7 (a) Enforcement of Adjudicated Rights. As against the other  
8 bodies of Watermaster, the Water Rights Panel shall have exclusive  
9 authority to move the Court to take such action as may be necessary to  
10 enforce the terms of the Judgment with regard to the extraction of  
11 Allowed Pumping Allocation and the maintenance of adjudicated  
12 groundwater extraction rights as provided in this Judgment.

13 (b) Requirement of Measuring Devices. The Water Rights  
14 Panel shall require all parties owning or operating any facilities for the  
15 extraction of groundwater from Central Basin to install and maintain at  
16 all times in good working order at such party's own expense,  
17 appropriate measuring devices at such times and as often as may be  
18 reasonable under the circumstances and to calibrate or test such  
19 devices.

20 (c) Inspections by Watermaster. The Water Rights Panel may  
21 make inspections of groundwater production facilities, including  
22 aquifer storage and recovery facilities, and measuring devices at such  
23 times and as often as may be reasonable under the circumstances and  
24 to calibrate or test such devices.

25 (d) Reports. Annually, the Water Rights Panel, in cooperation  
26 with the Administrative Body, shall report to the Court, concerning  
27 any or all of the following:

28 (i) Groundwater extractions

- (ii) Exchange Pool operation
- (iii) Status of the Regional Disadvantaged Community Incentive Program, if approved by the Court
- (iv) Violations of this Judgment and corrective action taken or sought
- (v) Change of ownership of Total Water Rights
- (vi) Assessments made by the Water Rights Panel and any costs incurred
- (vii) Whether the Water Rights Panel has become aware of the development of a Material Physical Harm, or imminent threat of the development of a Material Physical Harm, as required pursuant to Section IV(B) of this Judgment
- (viii) Recommendations, if any.

As provided in Section II.A(3), the Water Rights Panel may adopt the annual report prepared by the Administrative Body, and submit the same to the Court, or the Water Rights Panel may prepare, adopt and submit to the Court a separate report. The Chair of the Water Rights Panel shall be responsible for reporting to the Court concerning adjudicated water rights issues in the Basin.

(2) Assessment. The Water Rights Panel shall assess holders of water rights within the Central Basin an annual amount not to exceed \$1.00 per acre-foot of Allowed Pumping Allocation, by majority vote of the members of the Water Rights Panel. The body may assess a higher amount, subject to being overruled by Majority Protest. The assessment is intended to cover any costs associated with reporting responsibilities, any Judgment enforcement action, and the review of storage projects as a component of the “Storage Panel” as provided below. It is anticipated that this body will rely on the Administrative Body’s staff for the functions related to the Administrative Body’s responsibilities, but the

1 Water Rights Panel may engage its own staff if required in its reasonable  
2 judgment. Assessments will constitute a lien on the water right assessed,  
3 enforceable as provided in this Judgment.

4 (3) Rules. The Water Rights Panel may adopt and amend from time to  
5 time, at an open meeting of that Panel, rules consistent with this Judgment as may  
6 be reasonably necessary to carry out duties under the provisions of this Judgment  
7 within its particular area of responsibility. The Panel shall adopt its first set of  
8 rules and procedures within three (3) months following entry of this Third  
9 Amended Judgment. The rules shall be effective on such date after the mailing  
10 thereof to the Parties as is specified by the Panel, but not sooner than thirty (30)  
11 days after such mailing.

12 C. The Storage Panel.

13 The Storage Panel of the Central Basin Watermaster (“Storage Panel”) shall be a  
14 bicameral body consisting of (i) the Water Rights Panel and (ii) the Board of Directors of  
15 WRD. Action by the Storage Panel shall require separate action by a majority of each of  
16 its constituent bodies. The Storage Panel shall have the duties and responsibilities  
17 specified with regard to the Provisions for the Storage and Extraction of Stored  
18 Groundwater as set forth in Part IV and the other provisions of this Judgment.

19 D. Use of Facilities and Data Collected by Other Governmental Agencies.

20 Where practicable, the three bodies constituting the Central Basin Watermaster  
21 should not duplicate the collection of data relative to conditions of the Central Basin  
22 which is then being collected by one or more governmental agencies, but where  
23 necessary each such body may collect supplemental data. Where it appears more  
24 economical to do so, the Watermaster and its constituent bodies are directed to use such  
25 facilities of other governmental agencies as are available to it under either no cost or cost  
26 agreements with respect to the receipt of reports, billings to parties, mailings to parties,  
27 and similar matters.

28 E. Appeal from Watermaster Decisions.

1 Appeals concerning the budget proposed by the Administrative Body shall be  
2 governed by Section II(A)(4) of this Judgment. Appeals concerning decisions by the  
3 Storage Panel shall be governed by Section IV(P) of this Judgment. With respect to all  
4 other objections by a Party to any action or decision by the Watermaster, such objections  
5 will be governed by this Section II(E). Any party interested therein who objects to any  
6 rule, determination, order or finding made by the Watermaster or any constituent body  
7 thereof, may object thereto in writing delivered to the Administrative Body within 30  
8 days after the date the Watermaster, or any constituent body thereof, mails written notice  
9 of the making of such rule, determination, order or finding. Within 30 days after such  
10 delivery the Watermaster, or the affected constituent body thereof, shall consider said  
11 objection and shall amend or affirm his rule, determination, order or finding and shall  
12 give notice thereof to all parties. Any such party may file with the Court within 60 days  
13 from the date of said notice any objection to such rule, determination, order or finding of  
14 the Watermaster, or any constituent body thereof, and bring the same on for hearing  
15 before the Court at such time as the Court may direct, after first having served said  
16 objection upon all other parties. The Court may affirm, modify, amend or overrule any  
17 such rule, determination, order or finding of the Watermaster or its affected constituent  
18 body. Any objection under this paragraph shall not stay the rule, determination, order or  
19 finding of the Watermaster. However, the Court, by *ex parte* order, may provide for a  
20 stay thereof on application of any interested party on or after the date that any such party  
21 delivers to the Watermaster any written objection.

22 F. Effect of Non-Compliance by Watermaster With Time Provisions.

23 Failure of the Watermaster to perform any duty, power or responsibility set forth  
24 in this Judgment within the time limitation herein set forth shall not deprive the  
25 Watermaster or its applicable constituent body of authority to subsequently discharge  
26 such duty, power or responsibility, except to the extent that any such failure by the  
27 Watermaster may have rendered some otherwise required act by a party impossible.

28 G. Limitations on Administrative Body.

1 WRD shall not acquire Central Basin water rights, nor lease Central Basin water  
2 or water rights to or from any Party or third party. However, the foregoing shall (i) not be  
3 interpreted to restrict WRD's ability or authority to acquire water from any source for  
4 purposes of Artificial or Natural Replenishment or for water quality activities, and (ii)  
5 not restrict WRD's authority under California Water Code Section 60000 et seq. to  
6 develop reclaimed, recycled or remediated water for groundwater replenishment  
7 activities.

8 H. Regional Disadvantaged Communities Incentive Program.

9 The Water Rights Panel, acting through the General Manager of WRD, shall  
10 develop a Regional Disadvantaged Communities Incentive Program, pursuant to which a  
11 portion of the Community Storage Pool is reserved for the benefit of Disadvantaged  
12 Communities within the Central Basin. Nothing in this Judgment, nor the establishment  
13 of such a program, shall diminish the rights otherwise granted to Parties under this  
14 Judgment, including but not limited to the right to place water in storage in the  
15 Community Storage Pool. The Water Rights Panel shall meet within thirty (30) days of  
16 its formation to identify and consider potential third-party independent consultants who  
17 may be retained to design the program, including those recommended by the General  
18 Manager of WRD. The Water Rights Panel shall select a consultant within thirty (30)  
19 days thereafter. In the event the General Manager of WRD objects to the selected  
20 consultant, in writing, then the Water Rights Panel and the General Manager of WRD  
21 shall exchange a list of no more than two (2) consultants each for further consideration.  
22 If the Water Rights Panel and the General Manager of WRD are unable to agree to a  
23 consultant within an additional thirty (30) days, then the Chair of the Water Rights Panel  
24 shall file a request with the Court for an order appointing a consultant. Upon selection of  
25 a third-party independent consultant, whether through the Water Rights Panel process or  
26 the court process identified herein, the consultant shall design a detailed program and  
27 deliver it to the Water Rights Panel within ninety (90) days of the consultant's retention.  
28 All costs associated with design of the program shall be paid for out of the Water Rights

Panel’s assessment, as provided in Section II.B(2). The Water Rights Panel shall present the program to the Court for its review and approval within one year of entry of this Third Amended Judgment. If approved by the Court, the Water Rights Panel, acting through the General Manager of WRD, shall be responsible for administration of the Regional Disadvantaged Communities Incentive Program, including insuring that any funds generated through the program benefit Disadvantaged Communities. Any Storage Project established pursuant to this Program shall have priority to use up to 23,000 acre-feet of Available Storage within the Community Storage Pool, as further provided in Section IV.E(2). Watermaster shall report to the Court concerning such program as a part of its annual report.

### III. PROVISIONS FOR PHYSICAL SOLUTION TO MEET THE WATER REQUIREMENTS IN CENTRAL BASIN.

In order to provide flexibility to the injunction set forth in Part I of the Judgment, and to assist in a physical solution to meet water requirements in Central Basin, the injunction so set forth is subject to the following provisions.

#### A. Carryover of Portion of Allowed Pumping Allocation.

##### (1) Amount of Carryover.

Each party adjudged to have a Total Water Right or water rights and who, during a particular Administrative Year, does not extract from Central Basin a total quantity equal to such party’s Allowed Pumping Allocation for the particular Administrative Year, less any allocated subscriptions by such party to the Exchange Pool, or plus any allocated requests by such party for purchase of Exchange Pool water, is permitted to carry over (the “One Year Carryover”) from such Administrative Year the right to extract from Central Basin in the next succeeding Administrative Year so much of said total quantity as it did not extract in the particular Administrative Year, not to exceed (i) the Applicable Percentage of such party’s Allowed Pumping Allocation for the particular Administrative

1 Year, or 20 acre-feet, whichever of said percentage or 20 acre-feet is the larger,  
2 less (ii) the total quantity of water then held in that party's combined Individual  
3 and Community Storage accounts, as hereinafter defined, but in no event less than  
4 20% of the party's Allowed Pumping Allocation for the particular Administrative  
5 Year. For purposes of this Section, the "Applicable Percentage" shall be as  
6 follows for the years indicated:

7  
8 For the Administrative Year in which this  
9 Third Amended Judgment becomes final: 30%  
10 For the next Administrative Year: 40%  
11 For the next Administrative Year: 50%  
12 For the next Administrative Year and years  
13 following: 60%

14 (2) Conversion of Carryover to Stored Water.

15 A party having Carryover may, from time to time, elect to convert all or  
16 part of such party's Carryover to Stored Water as authorized herein ("Carryover  
17 Conversion") upon payment of the Replenishment Assessment to WRD. Such  
18 Stored Water shall be assigned to that party's Individual Storage Allocation, if  
19 available, and otherwise to the Community Storage Pool.

20 (3) Declared Water Emergency.

21 The Board of Directors of WRD may, from time to time, declare a water  
22 emergency upon a determination that conditions within the Central Basin relating  
23 to natural and imported water supplies are such that, without implementation of  
24 the Declared Water Emergency provisions of this subsection, the water resources  
25 of the Central Basin risk degradation. In making such declaration, the Board of  
26 Directors shall consider any information and requests provided by water  
27 producers, purveyors and other affected entities and shall, for that purpose, hold a  
28 public hearing in advance of such declaration. A Declared Water Emergency

1 shall extend to the end of the Administrative Year during which such resolution is  
2 adopted, unless sooner ended by similar resolution.

3 (4) Drought Carryover.

4 Following the declaration of a Declared Water Emergency and until the  
5 Declared Water Emergency ends either by expiration or by resolution of the  
6 Board of Directors of WRD, each party adjudged to have a Total Water Right or  
7 water rights and who, during a particular Administrative Year, does not extract  
8 from Central Basin a total quantity equal to such party's Allowed Pumping  
9 Allocation for the particular Administrative Year, less any allocated subscriptions  
10 by such party to the Exchange Pool, or plus any allocated requests by such party  
11 for purchase of Exchange Pool water, is permitted to carry over (the "Drought  
12 Carryover") from such Administrative Year the right to extract from Central  
13 Basin so much of said total quantity as it did not extract during the period of the  
14 Declared Water Emergency, to the extent such quantity exceeds the One Year  
15 Carryover, not to exceed an additional 35% of such party's Allowed Pumping  
16 Allocation, or additional 35 acre feet, whichever of said 35% or 35 acre feet is the  
17 larger, less the amount of such party's Stored Water. Carryover amounts shall  
18 first be allocated to the One Year Carryover and any remaining carryover amount  
19 for that year shall be allocated to the Drought Carryover.

20 (5) Accumulated Drought Carryover.

21 No further amounts shall be added to the Drought Carryover following the  
22 end of the Declared Water Emergency, provided however that in the event  
23 another Declared Water Emergency is declared, additional Drought Carryover  
24 may be added, to the extent such additional Drought Carryover would not cause  
25 the total Drought Carryover to exceed the limits set forth above. The Drought  
26 Carryover shall be supplemental to and shall not affect any previous drought  
27 carryover acquired by a party pursuant to previous order of the court.

28 B. When Over-Extractions May be Permitted.

1                   (1)     Underestimation of Requirements for Water.

2                   Any party hereto without Stored Water, having an Allowed Pumping  
3 Allocation, and not in violation of any provision of this Judgment may extract in  
4 an Administrative Year an additional quantity of water not to exceed: (a) 20% of  
5 such party's Allowed Pumping Allocation or 20 acre feet, whichever is greater,  
6 and (b) any amount in addition thereto which may be approved in advance by the  
7 Water Rights Panel of Watermaster.

8                   (2)     Reductions in Allowed Pumping Allocations in Succeeding Years  
9 to Compensate for Permissible Overextractions.

10                  Any such party's Allowed Pumping Allocation for the following  
11 Administrative Year shall be reduced by the amount over-extracted pursuant to  
12 paragraph 1 above, provided that if the Water Rights Panel determines that such  
13 reduction in the party's Allowed Pumping Allocation in one Administrative Year  
14 will impose upon such a party an unreasonable hardship, the said reduction in said  
15 party's Allowed Pumping Allocation shall be prorated over a period of five (5)  
16 Administrative Years succeeding that in which the excessive extractions by the  
17 party occurred. Application for such relief to the Water Rights Panel must be  
18 made not later than the 40th day after the end of the Administrative Year in which  
19 such excessive pumping occurred. The Water Rights Panel shall grant such relief  
20 if such over-extraction, or any portion thereof, occurred during a period of  
21 Declared Water Emergency.

22                  (3)     Reductions in Allowed Pumping Allocations for the Next  
23 Succeeding Administrative Year to Compensate for Overpumping.

24                  Whenever, pursuant to Section III(B)(1), a party over-extracts in excess of  
25 such party's Allowed Pumping Allocation plus that party's available One-Year  
26 Carryover and any Stored Water held by that party, and such excess has not been  
27 approved in advance by the Water Rights Panel, then such party's Allowed  
28 Pumping Allocation for the following Administrative Year shall be reduced by an

1 amount equivalent to its total over-extractions in the particular Administrative  
2 Year in which it occurred.

3 (4) Reports of Certain Over-extractions to the Court.

4 Whenever a party over-extracts in excess of 20% of such party's Allowed  
5 Pumping Allocation for the particular Administrative Year plus that party's  
6 available One-Year Carryover and any Stored Water held by that party, without  
7 having obtained prior approval of the Water Rights Panel, such shall constitute a  
8 violation of the Judgment and the Water Rights Panel shall make a written report  
9 to the Court for such action as the Court may deem necessary. Such party shall be  
10 subject to such injunctive and other processes and action as the Court might  
11 otherwise take with regard to any other violation of such Judgment.

12 (5) Effect of Over-extractions on Rights.

13 Any party who over-extracts from Central Basin in any Administrative  
14 Year shall not acquire any additional rights by reason of such over-extractions;  
15 nor shall any required reductions in extractions during any subsequent years  
16 reduce the Total Water Right or water rights of any party to the extent said over-  
17 extractions are in compliance with paragraph 1 above.

18 (6) Pumping Under Agreement With Plaintiff During Periods of  
19 Emergency.

20 Plaintiff WRD overlies Central Basin and engages in activities of  
21 replenishing the groundwaters thereof. Plaintiff by resolution has appropriated  
22 for use during emergencies the quantity of 17,000 acre feet of imported and  
23 reclaimed water replenished by it into Central Basin, and pursuant to such  
24 resolution Plaintiff reserves the right to use or cause the use of such quantity  
25 during such emergency periods for the benefit of Water Purveyors.

26 (a) Notwithstanding any other provision of this Judgment,  
27 parties who are Water Purveyors (including successors in interest) are  
28 authorized to enter into agreements with Plaintiff for extraction of a

1 portion of Plaintiff's 17,000 acre-feet of appropriated water, in excess  
2 of their respective Allowed Pumping Allocations for the particular  
3 Administrative Year when the following conditions are met:

4 (i) Plaintiff is in receipt of a resolution of the  
5 Board of Directors of the Metropolitan Water District of  
6 Southern California ("MWD") that there is an actual or  
7 immediately threatened temporary shortage of MWD's  
8 imported water supply compared to MWD's needs, or a  
9 temporary inability to deliver MWD's imported water  
10 supply throughout its area, which will be alleviated by  
11 overpumping from Central Basin.

12 (ii) The Board of Directors of both Plaintiff and  
13 Central Basin Municipal Water District by resolutions  
14 concur in the resolution of MWD's Board of Directors, and  
15 the Board of Directors of Plaintiff finds in its resolution  
16 that the average minimum elevation of water surface  
17 among those wells in the Montebello Forebay of the  
18 Central Basin designated as Los Angeles County Flood  
19 Control District Wells Nos. 1601T, 1564P, 1615P, and  
20 1626L, is at least 43.7 feet above sea level. This  
21 computation shall be based upon the most recent "static  
22 readings" taken, which shall have been taken not more than  
23 four weeks prior. Should any of the wells designated above  
24 become destroyed or otherwise be in a condition so that  
25 readings cannot be made, or should the owner prevent their  
26 use for such readings, the Board of Directors of the  
27 Plaintiff may, upon appropriate engineering  
28 recommendation, substitute such other well or wells as it

1 may deem appropriate.

2 (iii) In said resolution, Plaintiff's Board of  
3 Directors sets a public hearing, and notice of the time, place  
4 and date thereof (which may be continued from time to  
5 time without further notice) is given by First Class Mail to  
6 the current designees of the Parties, filed and served in  
7 accordance with Section VI(C) of this Judgment. Said  
8 notice shall be mailed at least five (5) days before the  
9 scheduled hearing date.

10 (iv) At said public hearing, parties (including  
11 successors in interest) are given full opportunity to be  
12 heard, and at the conclusion thereof the Board of Directors  
13 of Plaintiff by resolution decides to proceed with  
14 agreements under this Section III(B)(6).

15 (b) All such agreements shall be subject to the following  
16 requirements, and such others as Plaintiff's Board of Directors shall  
17 require:

18 (i) They shall be of uniform content except as  
19 to quantity involved, and any special provisions considered  
20 necessary or desirable with respect to local hydrological  
21 conditions or good hydrologic practice.

22 (ii) They shall be offered to all Water  
23 Purveyors, excepting those which Plaintiff's Board of  
24 Directors determines should not overpump because such  
25 overpumping would occur in undesirable proximity to a sea  
26 water barrier project designed to forestall sea water  
27 intrusion, or within or in undesirable proximity to an area  
28 within Central Basin wherein groundwater levels are at an

1 elevation where overpumping is under all the  
2 circumstances then undesirable.

3 (iii) The maximum terms for the agreements  
4 shall be four (4) months, which agreements shall  
5 commence on the same date and end on the same date (and  
6 which may be executed at any time within the four-month  
7 period), unless an extension thereof is authorized by the  
8 Court, under Part V of this Judgment.

9 (iv) They shall contain provisions requiring that  
10 the Water Purveyor executing the agreement pay to the  
11 Plaintiff a price in addition to the applicable replenishment  
12 assessment determined on the following formula. The  
13 normal price per acre-foot of Central Basin Municipal  
14 Water District's (CBMWD) treated domestic and municipal  
15 water, as "normal" price of such category of water is  
16 defined in Section III(C)(10) (price to be paid for Exchange  
17 Pool Water) as of the beginning of the contract term less  
18 the deductions set forth in said paragraph 10 for the  
19 Administrative Year in which the contract term  
20 commences. The agreement shall provide for adjustments  
21 in the first of said components for any proportional period  
22 of the contract term during which the CBMWD said normal  
23 price is changed, and if the agreement straddles two  
24 administrative years, the said deductions shall be adjusted  
25 for any proportionate period of the contract term in which  
26 the amount thereof or of either subcomponent changes for  
27 purposes of said paragraph 10. Any price for a partial acre-  
28 foot shall be computed pro rata. Payments shall be due and

1 payable on the principle that over extractions under the  
2 agreement are of the last water pumped in the  
3 Administrative Year, and shall be payable as the agreement  
4 shall provide.

5 (v) They shall contain provisions that: (1) All  
6 of such agreements (but not less than all) shall be subject to  
7 termination by Plaintiff if, in the Judgment of Plaintiff's  
8 Board of Directors, the conditions or threatened conditions  
9 upon which they were based have abated to the extent over  
10 extractions are no longer considered necessary; and (2) that  
11 any individual agreement or agreements may be terminated  
12 if the Plaintiff's Board of Directors finds that adverse  
13 hydrologic circumstances have developed as a result of  
14 over extractions by any Water Purveyor(s) which have  
15 executed said agreements, or for any other reason that  
16 Plaintiff's Board of Directors finds good and sufficient.

17 (c) Other matters applicable to such agreements and  
18 overpumping thereunder are as follows, without need for express  
19 provisions in the agreements;

20 (i) The quantity of overpumping permitted shall  
21 be additional to that which the Water Purveyor could  
22 otherwise overpump under this Judgment.

23 (ii) The total quantity of permitted overpumping  
24 under all said agreements during said four months shall not  
25 exceed seventeen thousand (17,000) acre feet, but the  
26 individual Water Purveyor shall not be responsible or  
27 affected by any violation of this requirement. That total is  
28 additional to over extractions otherwise permitted under

1 this Judgment.

2 (iii) Only one four month period may be utilized  
3 by Plaintiff in entering into such agreements, as to any one  
4 emergency or continuation thereof declared by MWD's  
5 Board of Directors under Section III(B)(6)(a).

6 (iv) If any party claims it is being damaged or  
7 threatened with damage by the over extractions by any  
8 party to such an agreement, the first party or the Water  
9 Rights Panel may seek appropriate action of the Court for  
10 termination of any such agreement upon notice of hearing  
11 to the party complaining, to the party to said agreement, to  
12 the plaintiff, and to any parties who have filed a request for  
13 special notice. Any termination shall not affect the  
14 obligation of the party to make payments under the  
15 agreement for over extractions which did occur thereunder.

16 (v) Plaintiff shall maintain separate accounting  
17 of the proceeds from payments made pursuant to  
18 agreements entered into under this Part. Said fund shall be  
19 utilized solely for purposes of replenishment in  
20 replacement of waters in Central Basin and West Basin.  
21 Plaintiff shall as soon as practicable cause replenishment in  
22 Central Basin by the amounts to be overproduced pursuant  
23 to this Paragraph 6, whether through spreading, injection,  
24 or in lieu agreements.

25 (vi) Over extractions pursuant to the agreements  
26 shall not be subject to the "make up" provisions of the  
27 Judgment as amended, provided that if any party fails to  
28 make payments as required by the agreement, Plaintiff may

1 require such “make up” under Section III(B)(3) of this  
2 Judgment.

3 (vii) A Water Purveyor under any such  
4 agreement may, and is encouraged to enter into appropriate  
5 arrangements with customers who have water rights in  
6 Central Basin under or pursuant to this Judgment whereby  
7 the Water Purveyor will be assisted in meeting the  
8 objectives of the agreement.

9 (7) Exemption for Extractors of Contaminated Groundwater.

10 Any party herein may petition WRD for a Non-consumptive Water Use  
11 Permit as part of a project to remedy or ameliorate groundwater contamination. If  
12 the petition is granted as set forth in this paragraph, the petitioner may extract the  
13 groundwater as permitted hereinafter, without the production counting against the  
14 petitioner’s production rights.

15 (a) If the Board of WRD determines by Resolution that there is  
16 a problem of groundwater contamination that a proposed program will  
17 remedy or ameliorate, an operator may make extractions of  
18 groundwater to remedy or ameliorate that problem without the  
19 production counting against the petitioner’s production rights if the  
20 water is not applied to beneficial surface use, its extractions are made  
21 in compliance with all the terms and conditions of the Board  
22 Resolution, and the Board has determined in the Resolution either of  
23 the following:

24 (i) The groundwater to be extracted is unusable and  
25 cannot be economically treated or blended for use with  
26 other water.

27 (ii) The proposed program involves extraction of usable  
28 water in the same quantity as will be returned to the

1 underground without degradation of quality.

2 (b) The Resolution may provide those terms and conditions the  
3 Board deems appropriate, including, but not limited to, restrictions on  
4 the quantity of the extractions to be so exempted, limitations on time,  
5 periodic reviews, requirement of submission of test results from a  
6 Board-approved laboratory, and any other relevant terms or conditions.

7 (c) Upon written notice to the operator involved, the Board  
8 may rescind or modify its Resolution. The rescission or modification  
9 of the Resolution shall apply to groundwater extractions occurring  
10 more than ten (10) days after the rescission or modification. Notice of  
11 rescission or modification shall be either mailed first class mail,  
12 postage prepaid, at least two weeks prior to the meeting of the Board at  
13 which the rescission or modification will be made to the address of  
14 record of the operator or personally delivered two weeks prior to the  
15 meeting.

16 (d) The Board's decision to grant, deny, modify or revoke a  
17 permit or to interrupt or stop a permitted project may be appealed to  
18 this court within thirty days of the notice thereof to the applicant and  
19 upon thirty days' notice to the designees of all parties herein.

20 (e) WRD shall monitor and periodically inspect the project for  
21 compliance with the terms and conditions for any permit issued  
22 pursuant to these provisions.

23 (f) No party shall recover costs from any other party herein in  
24 connection with determinations made with respect to this Part.

25 (8) "Call" on Carryover Converted to Stored Water.

26 Where any Party has elected, as permitted by Section III(A)(2), to convert  
27 Carryover to Stored Water, any other Party which has not, within the previous ten  
28 (10) years, been granted approval to extract Carryover Conversion under this

1 Section III(B)(8) more than five (5) times, may apply to the Storage Panel for the  
2 right to extract all or a portion of that Carryover Conversion in the year such  
3 Conversion occurs. The Storage Panel shall grant such request, providing there is  
4 no Material Physical Harm, if it determines that leased groundwater to meet the  
5 applicant's needs within the Basin cannot be obtained for less than forty-five  
6 percent (45%) of MWD's Imported Water rate for delivery of untreated water to  
7 the Central Basin spreading facilities (which rate is presently MWD's "Full  
8 Service Untreated Volumetric Cost, Tier 1"), and that the applicant will fully  
9 extract its Allowed Pumping Allocation, Carryover, and Stored Water, if any, in  
10 addition to its permitted overextraction under Section III(B)(1), prior to accessing  
11 such Carryover Conversion.

12 Upon such approval, the applicant may thereafter extract such water as  
13 provided herein. A Party so extracting groundwater shall fully restore such  
14 extracted water (either through under-extraction of its rights or through importing  
15 water) during the five-year period following the Year in which the extraction  
16 under this Section occurs. Otherwise, the extracting Party shall pay to the  
17 Watermaster an amount equal to 100% of MWD's Imported Water rate for  
18 purchase and delivery of untreated water to the Central Basin spreading facilities  
19 (which rate is presently MWD's "Full Service Untreated Volumetric Cost, Tier  
20 1") whether or not such water is available that year, for the year during which is  
21 the fifth anniversary of the year during which such Carryover Conversion  
22 extraction occurs, multiplied by the amount of Carryover Conversion so extracted  
23 and not restored during such five-year period. Payment shall be made within  
24 thirty (30) days of demand by Watermaster. No Replenishment Assessment shall  
25 be due on Carryover Conversion so extracted. However, the Party must deposit  
26 with the Watermaster an amount equal to the Replenishment Assessment that  
27 would otherwise be imposed by WRD upon such extraction. If the party restores  
28 the water within the 5-year repayment period, then the Watermaster shall

1 promptly return the deposit to the Party, without interest. If the Party does not  
2 restore the water within the 5-year repayment period, the deposit shall be credited  
3 towards the Party's obligation to pay 100% of MWD's Imported Water rate as  
4 required herein.

5 Should there be multiple requests to so extract Carryover Conversion in  
6 the same year, the Storage Panel shall allocate such extraction right such that each  
7 requesting party may extract a pro rata portion of the available Carryover  
8 Conversion for that year. No party may extract in excess of 2,500 acre feet of  
9 groundwater pursuant to this Section III(B)(8) in a single Year. Amounts paid to  
10 Watermaster hereunder shall be used by WRD solely for purchase of water for  
11 replenishment in the Basin. Watermaster, through the Storage Panel, shall give  
12 reasonable notice to the Parties of any application to so extract Carryover  
13 Conversion in such manner as the Storage Panel shall determine, including,  
14 without limitation, notice by electronic mail or by website posting, at least ten  
15 (10) days prior to consideration of any such application.

16 C. Exchange Pool Provisions.

17 (1) Definitions.

18 For purposes of these Exchange Pool provisions, the following words and  
19 terms have the following meanings:

20 (a) "Exchange Pool" is the arrangement hereinafter set forth  
21 whereby certain of the parties, ("Exchangees") may, notwithstanding  
22 the other provisions of the Judgment, extract additional water from  
23 Central Basin to meet their needs, and certain other of the parties  
24 ("Exchangors"), reduce their extractions below their Allowed Pumping  
25 Allocations in order to permit such additional extractions by others.

26 (b) "Exchangor" is one who offers, voluntarily or otherwise,  
27 pursuant to subsequent provisions, to reduce its extractions below its  
28 Allowed Pumping Allocation in order to permit such additional

1 extractions by others.

2 (c) “Exchangee” is one who requests permission to extract  
3 additional water from Central Basin.

4 (d) “Undue hardship” means unusual and severe economic or  
5 operational hardship, other than that arising (i) by reason of any  
6 differential in quality that might exist between water extracted from  
7 Central Basin and water available for importation or (ii) by reason of  
8 any difference in cost to a party in subscribing to the Exchange Pool  
9 and reducing its extractions of water from Central Basin in an  
10 equivalent amount as opposed to extracting any such quantity itself.

11 (2) Parties Who May Purchase Water Through the Exchange Pool.

12 Any party not having existing facilities for the taking of imported water as  
13 of the beginning of any Administrative Year, and any party having such facilities  
14 as of the beginning of any Administrative Year who is unable, without undue  
15 hardship, to obtain, take, and put to beneficial use, through its distribution system  
16 or systems existing as of the beginning of the particular Administrative Year,  
17 imported water in a quantity which, when added to its Allowed Pumping  
18 Allocation for that particular Administrative Year, will meet its estimated needs  
19 for that particular Administrative Year, may purchase water from the Exchange  
20 Pool, subject to the limitations contained in this Section III(C) (Subpart “C”  
21 hereinafter).

22 (3) Procedure for Purchasing Exchange Pool Water.

23 Not later than the 40th day following the commencement of each  
24 Administrative Year, each such party desiring to purchase water from the  
25 Exchange Pool shall file with the Watermaster a request to so purchase, setting  
26 forth the amount of water in acre feet that such party estimates that it will require  
27 during the then current Administrative Year in excess of the total of:

28 (a) Its Allowed Pumping Allocation for that particular

Administrative Year; and

(b) The imported water, if any, which it estimates it will be able, without undue hardship, to obtain, take and put to beneficial use, through its distribution system or systems existing as of the beginning of that particular Administrative Year.

Any party who as of the beginning of any Administrative Year has existing facilities for the taking of imported water and who makes a request to purchase from the Exchange Pool must provide with such request substantiating data and other proof which, together with any further data and other proof requested by the Water Rights Panel, establishes that such party is unable without undue hardship, to obtain, take and put to beneficial use through its said distribution system or systems a sufficient quantity of imported water which, when added to its said Allowed Pumping Allocation for the particular Administrative Year, will meet its estimated needs. As to any such party, the Water Rights Panel shall make a determination whether the party has so established such inability, which determination shall be subject to review by the court under the procedure set forth in Part II of this Judgment. Any party making a request to purchase from the Exchange Pool shall either furnish such substantiating data and other proof, or a statement that such party had no existing facilities for the taking of imported water as of the beginning of that Administrative Year, and in either event a statement of the basis for the quantity requested to be purchased.

(4) Subscriptions to Exchange Pool.

(a) Required Subscription. Each party having existing facilities for the taking of imported water as of the beginning of any Administrative Year hereby subscribed to the Exchange Pool for purposes of meeting Category (a) requests thereon, as more particularly defined in paragraph 5 of this Subpart C, twenty percent

1 (20%) of its Allowed Pumping Allocation, or the quantity of imported  
2 water which it is able, without undue hardship, to obtain, take and put  
3 to beneficial use through its distribution system or systems existing as  
4 of the beginning of the particular Administrative Year in addition to  
5 such party's own estimated needs for imported water during that  
6 Administrative Year, whichever is the lesser. A party's subscription  
7 under this subparagraph (a) and subparagraph (b) of this paragraph 4 is  
8 sometimes hereinafter referred to as a "required subscription."

9 (b) Report to Watermaster Water Rights Panel by Parties with  
10 Connections and Unable to Subscribe 20%. Any party having existing  
11 facilities for the taking of imported water and estimating that it will be  
12 unable, without undue hardship, in that Administrative Year to obtain,  
13 take and put to beneficial use through its distribution system or  
14 systems existing as of the beginning of that Administrative Year,  
15 sufficient imported water to further reduce its extractions from the  
16 Central Basin by twenty percent (20%) of its Allowed Pumping  
17 Allocation for purposes of providing water to the Exchange Pool must  
18 furnish not later than the 40th day following the commencement of  
19 such Administrative Year substantiating data and other proof which,  
20 together with any further data and other proof requested by the Water  
21 Rights Panel, establishes said inability or such party shall be deemed  
22 to have subscribed twenty percent (20%) of its Allowed Pumping  
23 Allocation for the purpose of providing water to the Exchange Pool.  
24 As to any such party so contending such inability, the Water Rights  
25 Panel shall make a determination whether the party has so established  
26 such inability, which determination shall be subject to review by the  
27 Court under the procedure set forth in Part II of this Judgment.

28 (c) Voluntary Subscriptions. Any party, whether or not having

1 facilities for the taking of imported water, who desires to subscribe to  
2 the Exchange Pool a quantity or further quantity of its Allowed  
3 Pumping Allocation, may so notify the Water Rights Panel in writing  
4 of the quantity of such offer on or prior to the 40th day following the  
5 commencement of the particular Administrative Year. Such  
6 subscriptions are referred to hereinafter as “voluntary subscriptions.”  
7 Any Exchangor who desires that any part of its otherwise required  
8 subscription not needed to fill Category (a) requests shall be available  
9 for Category (b) requests may so notify the Water Rights Panel in  
10 writing on or prior to said 40th day. If all of that Exchangor’s  
11 otherwise required subscription is not needed in order to fill Category  
12 (a) requests, the remainder of such required subscription not so used,  
13 or such part thereof as such Exchangor may designate, shall be deemed  
14 to be a voluntary subscription.

15 (5) Limitations on Purchases of Exchange Pool Water and Allocation  
16 of Requests to Purchase Exchange Pool Water Among Exchangors.

17 (a) Categories of Requests. Two categories of Exchange Pool  
18 requests are established as follows:

19 (i) Category (a) requests. The quantity requested by  
20 each Exchangee, whether or not that Exchangee has an  
21 Allowed Pumping Allocation, which quantity is not in  
22 excess of 150% of its Allowed Pumping Allocation, if any,  
23 or 100 acre feet, whichever is greater. Requests or portions  
24 thereof within the above criteria are sometimes hereinafter  
25 referred to as “Category (a) requests.”

26 (ii) Category (b) requests. The quantity requested by  
27 each Exchangee having an Allowed Pumping Allocation to  
28 the extent the request is in excess of 150% of that Allowed

1 Pumping Allocation or 100 acre feet, whichever is greater,  
2 and the quantity requested by each Exchangee having no  
3 Allowed Pumping Allocation to the extent the request is in  
4 excess of 100 acre feet. Portions of requests within the  
5 above criteria are sometimes hereinafter referred to as  
6 “Category (b) requests.”

7 (b) Filling of Category (a) Requests. All Exchange Pool  
8 subscriptions, required and voluntary, shall be available to fill  
9 Category (a) requests. Category (a) requests shall be filled first from  
10 voluntary subscriptions, and if voluntary subscriptions should be  
11 insufficient to fill all Category (a) requests required subscriptions shall  
12 be then utilized to fill Category (a) requests. All Category (a) requests  
13 shall be first filled before any Category (b) requests are filled.

14 (c) Filling of Category (b) Requests. To the extent that  
15 voluntary subscriptions have not been utilized in filling Category (a)  
16 requests, Category (b) requests shall be filled only out of any  
17 remaining voluntary subscriptions. Required subscriptions will then  
18 be utilized for the filling of any remaining Category (b) requests.

19 (d) Allocation of Requests to Subscriptions When Available  
20 Subscriptions Exceed Requests. In the event the quantity of  
21 subscriptions available for any category of requests exceeds those  
22 requests in that category, or exceeds the remainder of those requests in  
23 that category, such requests shall be filled out of such subscriptions  
24 proportionately in relation to the quantity of each subscription.

25 (e) Allocation of Subscriptions to Category (b) Requests in the  
26 Event of Shortage of Subscriptions. In the event available  
27 subscriptions are insufficient to meet Category (b) requests, available  
28 subscriptions shall be allocated to each request in the proportion that

1 the particular request bears to the total requests of the particular  
2 category.

3 (6) Additional Voluntary Subscriptions.

4 If subscriptions available to meet the requests of Exchanges are  
5 insufficient to meet all requests, additional voluntary subscriptions may be  
6 solicited and received from parties by the Water Rights Panel. Such additional  
7 subscriptions shall be allocated first to Category (a) requests to the extent unfilled,  
8 and next to Category (b) requests to the extent unfilled. All allocations are to be  
9 otherwise in the same manner as earlier provided in paragraph 5 (a) through 5 (e)  
10 inclusive.

11 (7) Effect if Category (a) Requests Exceed Available Subscriptions,  
12 Both Required and Voluntary.

13 In the event that the quantity of subscriptions available to fill Category (a)  
14 requests is less than the total quantity of such requests, the Exchanges may,  
15 nonetheless, extract the full amount of their Category (a) requests otherwise  
16 approved by the Water Rights Panel as if sufficient subscriptions were available.  
17 The amounts received by the Water Rights Panel on account of that portion of the  
18 approved requests in excess of the total quantities available from Exchanges  
19 shall be paid by the Water Rights Panel to WRD in trust for the purpose of  
20 purchasing imported water and spreading the same in Central Basin for  
21 replenishment thereof. Thereafter WRD may, at any time, withdraw said funds or  
22 any part thereof so credited in trust for the aforesaid purpose, or may by the 40th  
23 day of any Administrative Year utilize all or any portion of said funds for the  
24 purchase of water available from subscriptions by Exchanges in the event the  
25 total quantity of such subscriptions exceeds the total quantity of approved  
26 requests by parties to purchase Exchange Pool water. To the extent that there is  
27 such an excess of available subscriptions over requests and to the extent that the  
28 existing credit in favor of WRD is sufficient to purchase such excess quantity at

1 the price established for Exchange Pool purchases during that Administrative  
2 Year, the money shall be paid to the Exchangors in the same manner as if another  
3 party had made such purchase as an Exchangee. WRD shall not extract any such  
4 Exchange Pool water so purchased.

5 (8) Additional Pumping by Exchangees Pursuant to Exchange Pool  
6 Provisions.

7 An Exchangee may extract from Central Basin in addition to its Allowed  
8 Pumping Allocation for a particular Administrative Year that quantity of water  
9 which it has requested to purchase from the Exchange Pool during that  
10 Administrative Year and which has been allocated to it pursuant to the provisions  
11 of paragraphs 5, 6 and 7. The first pumping by an Exchangee in any  
12 Administrative Year shall be deemed to be pumping of the party's allocation of  
13 Exchange Pool water.

14 (9) Reduction in Pumping by Exchangors.

15 Each Exchangor shall in each Administrative Year reduce its extractions  
16 of water from Central Basin below its Allowed Pumping Allocation for the  
17 particular year in a quantity equal to the quantity of Exchange Pool requests  
18 allocated to it pursuant to the provisions of paragraphs 4, 5, 6 and 7 of this  
19 Subpart C.

20 (10) Price to be Paid for Exchange Pool Water.

21 The price to be paid by Exchangees and to be paid to Exchangors per acre  
22 foot for required and voluntary subscriptions of Exchangors utilized to fill  
23 requests on the Exchange Pool by Exchangees shall be the dollar amount  
24 computed as follows by the Water Rights Panel for each Administrative Year.  
25 The "normal" price as of the beginning of the Administrative Year charged by  
26 Central Basin Municipal Water District (CBMWD) for treated MWD  
27 (Metropolitan Water District of Southern California) water used for domestic and  
28 municipal purposes shall be determined, and if on that date there are any changes

1 scheduled during that Administrative Year in CBMWD's "normal" price for such  
2 category of water, the weighted daily "normal" CBMWD price shall be  
3 determined and used in lieu of the beginning such price; and there shall be  
4 deducted from such beginning or weighted price, as the case may be, the  
5 "incremental cost of pumping water in Central Basin" at the beginning of the  
6 Administrative Year and any then current rate or rates, of assessments levied on  
7 the pumping of groundwater in Central Basin by Plaintiff District and any other  
8 governmental agency. The "normal" price charged by CBMWD shall be the  
9 highest price of CBMWD for normal service excluding any surcharge or higher  
10 rate for emergency deliveries or otherwise failing to comply with CBMWD rates  
11 and regulations relating to earlier deliveries. The "incremental cost of pumping  
12 water in Central Basin" as of the beginning of the Administrative Year shall be  
13 deemed to be the Southern California Edison Company Schedule No. PA-1 rate  
14 per kilowatt-hour, including all adjustments and all uniform authorized additions  
15 to the basic rate, multiplied by 560 kilowatt-hours per acre-foot, rounded to the  
16 nearest dollar (which number of kilowatt-hours has been determined to represent  
17 the average energy consumption to pump an acre-foot of water in Central Basin).  
18 In applying said PA-1 rate the charge per kilowatt-hour under the schedule shall  
19 be employed and if there are any rate blocks then the last rate block shall be  
20 employed. Should a change occur in Edison schedule designations, the Water  
21 Rights Panel shall employ that applicable to motors used for pumping water by  
22 municipal utilities.

23 (11) Carry-over of Exchange Pool Purchases by Exchangees.

24 An Exchangee who does not extract from Central Basin in a particular  
25 Administrative Year a quantity of water equal to the total of (a) its Allowed  
26 Pumping Allocation for that particular Administrative Year, reduced by any  
27 authorized amount of carryover into the next succeeding Administrative Year  
28 pursuant to the provisions of Section III(A) of this Judgment, and (b) the quantity

1 that it purchased from the Exchange Pool for that particular Administrative Year,  
2 may carry over into the next succeeding Administrative Year the right to extract  
3 from Central Basin a quantity equal to the difference between said total and the  
4 quantity actually extracted in that Administrative Year, but not exceeding the  
5 quantity purchased from the Exchange Pool for that Administrative Year. Any  
6 such carryover shall be in addition to that provided in said Section III(A).

7 If the "Basinwide Average Exchange Pool Price" in the next succeeding  
8 Administrative Year exceeds the "Exchange Pool Price" in the previous  
9 Administrative Year any such Exchangee exercising such carryover rights  
10 hereinabove provided shall pay to the Watermaster, forthwith upon the  
11 determination of the "Exchange Pool Price" in said succeeding Administrative  
12 Year, and as a condition to such carryover rights, an additional amount  
13 determined by multiplying the number of acre feet of carryover by the difference  
14 in "Exchange Pool Price" as between the two Administrative Years. Such  
15 additional payment shall be miscellaneous income to the Watermaster which shall  
16 be applied by it against that share of the Watermaster's Administrative Body's  
17 budget to be paid by the parties to this Agreement for the second Administrative  
18 Year succeeding that in which the Exchange Pool water was so purchased. For  
19 purposes of this paragraph, the term Basinwide Average Exchange Pool Price  
20 means the average price per acre foot paid for Exchange Pool water produced  
21 within the Central Basin during the year for which such determination is to be  
22 made, taking into account all Exchange Pool transactions consummated during  
23 that year.

24 (12) Notification by Watermaster to Exchangors and Exchangees of  
25 Exchange Pool Requests and Allocations Thereof and Price of Exchange Pool  
26 Water.

27 Not later than the 65th day after the commencement of each  
28 Administrative Year, the Administrative Body of Watermaster shall determine

1 and notify all Exchangors and Exchangees of the total of the allocated requests for  
2 Exchange Pool water and shall provide a schedule divided into categories of  
3 requests showing the quantity allocated to each Exchangee and a schedule of the  
4 allocation of the total Exchange Pool requirements among the Exchangors. Such  
5 notification shall also advise Exchangors and Exchangees of the prices to be paid  
6 to Exchangors for subscriptions utilized and the Exchange Pool Price for that  
7 Administrative Year as determined by the Water Rights Panel. The  
8 determinations of the Watermaster in this regard shall be subject to review by the  
9 Court in accordance with the procedure set forth in Part II of this Judgment.

10 (13) Payment by Exchangees.

11 Each Exchangee shall, on or prior to last day of the third month of each  
12 Administrative Year, pay to the Watermaster one-quarter of said price per acre-  
13 foot multiplied by the number of acre feet of such party's approved request and  
14 shall, on or before the last day of each of the next succeeding three months, pay a  
15 like sum to the Watermaster. Such amounts must be paid by each Exchangee  
16 regardless of whether or not it in fact extracts or uses any of the water it has  
17 requested to purchase from the Exchange Pool.

18 (14) Payments to Exchangors.

19 As soon as possible after receipt of moneys from Exchangees, the  
20 Watermaster shall remit to the Exchangors their pro rata portions of the amount so  
21 received in accordance with the provisions of paragraph 10 above.

22 (15) Delinquent Payments.

23 Any amounts not paid on or prior to any due date above shall carry interest  
24 at the rate of 1% per month or any part of a month. Any amounts required to be  
25 so paid may be enforced by the equitable powers of the Court, including, but not  
26 limited to, the injunctive process of the Court. In addition thereto, the  
27 Watermaster, as Trustee for the Exchangors and acting through the Water Rights  
28 Panel, may enforce such payment by any appropriate legal action, and shall be

1 entitled to recover as additional damages reasonable attorneys' fees incurred in  
2 connection therewith. If any Exchangee shall fail to make any payments required  
3 of it on or before 30 days after the last payment is due, including any accrued  
4 interest, said party shall thenceforward not be entitled to purchase water from the  
5 Exchange Pool in any succeeding Administrative Year except upon order of the  
6 Court, upon such conditions as the Court may impose.

7  
8 IV. PROVISIONS FOR THE STORAGE OF WATER AND THE EXTRACTION  
9 OF STORED WATER.

10 A. Adjudication of Available Dewatered Space, Storage Capacity and  
11 Storage Apportionment.

12 There exists within the Basin a substantial amount of available space which has  
13 not been optimally utilized for basin management and for storage of native and imported  
14 waters. The Court finds and determines that (i) there is 330,000 acre feet of Available  
15 Dewatered Space in the Basin; (ii) use of this Available Dewatered Space will increase  
16 reasonable and beneficial use of the Basin by permitting the more efficient procurement  
17 and management of Replenishment Water, conjunctive use, and for direct and in-lieu  
18 recharge, thereby increasing the prudent storage and recovery of Stored Water for later  
19 use by parties to this Judgment, conservation of water and reliability of the water supply  
20 available to all Parties; and (iii) use of the Available Dewatered Space pursuant to the  
21 terms and conditions of this Judgment will not result in Material Physical Harm.

22 B. Avoidance of Material Physical Harm.

23 It is essential that the use of the Available Dewatered Space be undertaken for the  
24 greatest public benefit pursuant to uniform, certain, and transparent regulation that  
25 encourages the conservation of water and reliability of the water supply, avoids Material  
26 Physical Harm, and promotes the reasonable and beneficial use of water. Accordingly,  
27 in the event Watermaster becomes aware of the development of a Material Physical  
28 Harm, or imminent threat of the development of a Material Physical Harm, relating to the

1 use of the Available Dewatered Space, Watermaster shall, within thirty (30) days  
2 thereafter, notice a hearing before the Court and concurrently file a report with the Court,  
3 served on all parties, which shall explain the relevant facts then known to Watermaster  
4 relating to the Material Physical Harm, or imminent threat thereof, including without  
5 limitation, the location of the occurrence, the source or cause, existing and potential  
6 physical impacts or consequences of the identified or threatened material Physical Harm,  
7 and any recommendations to remediate the identified or threatened Material Physical  
8 Harm.

9 C. Apportionment of Available Dewatered Space.

10 To fairly balance the needs of the divergent interests of parties having water rights  
11 in the Basin, on the one hand, and the replenishment functions of WRD on the other  
12 hand, and in consideration of the shared desire and public purpose of removing  
13 impediments to the voluntary conservation, storage, exchange and transfer of water, all  
14 of the Available Dewatered Space is hereby adjudicated and apportioned into  
15 complimentary classifications of Stored Water and a Basin Operating Reserve as set  
16 forth in this Part IV. The apportionment contemplates flexible administration of storage  
17 capacity where use is apportioned among competing needs, while allowing all Available  
18 Dewatered Space to be used from time to time on a “space available” basis, subject to the  
19 priorities specified in this Judgment, and as further defined in Section IV(I) of this  
20 Judgment. The Court further finds and determines that, of the Available Dewatered  
21 Space, there is 220,000 acre-feet of storage capacity in the Central Basin which is  
22 presently available (“Adjudicated Storage Capacity”). The use of Adjudicated Storage  
23 Capacity as provided in this Judgment will not adversely affect the efficient operation of  
24 the Basin or the recharge of water necessary for the production of the parties’ respective  
25 Allowed Pumping Allocations. The apportionment of Adjudicated Storage Capacity as  
26 provided herein will allow for flexible administration of groundwater storage within the  
27 Basin. The Adjudicated Storage Capacity is hereby assigned to Individual Storage  
28 Allocations and Community Storage as provided herein, provided however that if all

1 space in a particular classification is fully occupied then, on a “space available” basis, to  
2 available space within the other classifications of Adjudicated Storage Capacity and,  
3 only then, to available space within Basin Operating Reserve.

4 The Court further finds and determines that, out of the Available Dewatered  
5 Space, there is 110,000 acre feet that should be set aside for use by WRD as a Basin  
6 Operating Reserve, provided in Section IV(L), and subject to temporary occupancy by  
7 Stored Water as permitted hereunder.

8 No storage of water shall occur in the Basin except in conformity with this  
9 Judgment.

10 D. Individual Storage Allocation.

11 Each Party having an adjudicated groundwater extraction right hereunder shall  
12 have a priority right to store water in an Individual Storage Account, through conversion  
13 of Carryover to Stored Water as provided herein, or by any means authorized by this  
14 Judgment, up to a maximum of 50% of such party’s Allowed Pumping Allocation. The  
15 cumulative quantity of Adjudicated Storage Capacity subject to individual storage  
16 allocation is 108,750 acre-feet. In recognition of prior importation of water which was  
17 introduced into the Basin as Stored Water, and which has not yet been extracted, the  
18 Court finds and determines that, as of the date of this Order, the following Parties have  
19 occupied a portion of their respective Individual Storage Allocations and have all  
20 associated rights therein, as follows:

21	City of Long Beach:	13,076.8 acre-feet
22	City of Lakewood:	500 acre-feet
23	City of Downey:	500 acre-feet
24	City of Cerritos	500 acre-feet

25 E. Community Storage; Regional Disadvantaged Communities Incentive  
26 Program.

27 In addition to Individual Storage Allocation, a Party that has fully occupied its  
28 Individual Storage allocation may, on a first in time, first in right basis (subject to the

limits expressed below) place water into storage in the “Community Storage Pool.” The cumulative quantity of Adjudicated Storage Capacity allocated to Community Storage shall be 111,250 acre-feet. So long as there is available capacity in the Community Storage Pool, any Party may store water in the Community Storage Pool through conversion of Carryover to Stored Water as provided herein, or by any other means authorized by this Judgment, provided such Party has first fully occupied that party’s available Individual Storage Allocation.

(1) Parties to this Judgment which, as of January 1, 2013, held Allowed Pumping Allocation of not greater than 5,000 acre-feet shall have a first priority right to occupy, in the aggregate, up to 10,000 acre-feet of storage space within the Central Basin Community Storage Pool, on the basis of first in time, first in right.

(2) Water stored pursuant to the Regional Disadvantaged Communities Incentive Program shall have a second priority right to occupy up to 23,000 acre-feet within the Community Storage Pool, on such terms as shall be determined by the Court.

(3) Any further storage in excess of the maximum quantity of Community Storage will be on a “space-available” interim basis. From time to time, and on a “space-available” basis, the total quantity of water available for storage is permitted to exceed Adjudicated Storage Capacity for the Community Storage Pool on an interim basis. This interim storage may occur if storage capacity exists as a result of unused Adjudicated Storage Capacity within other classifications, or available space exists in the Basin Operating Reserve. Such interim storage, however, is subject to priority rights to such Dewatered Space as provided in this Judgment. A party that seeks to convert the water temporarily held in interim storage to a more firm right, may contract for the use of another party’s Individual Storage Allocation, or may add such water to the Community Storage Pool once space therein becomes available.

1           (4) After a party occupies available storage capacity within the  
2 Community Storage Pool and then withdraws water from the Community Storage  
3 Pool, the storing party will be allowed a period of twenty-four (24) months to  
4 refill the evacuated storage before the capacity will be determined excess and  
5 available for use by other parties. Once the Basin's Community Storage Pool has  
6 been filled for the first time, a party may exercise its twenty-four (24) month refill  
7 priority only once, and then only provided there is then capacity available to  
8 permit that party to refill the vacated space. Except to the extent Community  
9 Storage space may be subject to such priority right to re-fill, all space therein shall  
10 be occupied on a first in time, first in right basis.

11           (5) A party that has occupied storage in the Community Storage Pool  
12 for ten (10) consecutive years shall be deemed to extract its Stored Water first in  
13 subsequent years (notwithstanding the order of water production set forth in  
14 Section I(B)(3)) until its entire Community Storage account has been extracted,  
15 but thereafter may again make use of Community Storage on the same terms  
16 available to other parties on a first in time, first in right, space-available basis.

17           (6) Any quantity of water held in the Community Storage Pool for a  
18 term greater than ten (10) consecutive years shall be assessed an annual water loss  
19 equal to 5% of the lowest quantity of water held within the party's Community  
20 Storage Pool account at any time during the immediately preceding ten-year  
21 period. The lowest quantity means the smallest amount of water held by the Party  
22 in the Community Storage Pool during any of the preceding ten (10) years, with a  
23 new loss calculation being undertaken every year. Water subject to the loss  
24 assessment will be deemed dedicated to the Basin Operating Reserve in  
25 furtherance of the physical solution without compensation. Water lost to the  
26 Basin shall constitute water replenished into the Central Basin for the benefit of  
27 all parties

28       F.     Limit on Storage.

1 Irrespective of the category of storage utilized, each party to this Judgment may  
2 not cumulatively have in storage at any time Stored Water totaling more than two  
3 hundred percent (200%) of that party's Allowed Pumping Allocation. Subject to the  
4 foregoing, the right to produce Stored Water may be freely transferred to another party to  
5 this Judgment, or as otherwise permitted herein.

6 G. Extractions of Stored Water; Exemption from Replenishment Assessment.

7 The Court finds and declares that the extraction of Stored Water as permitted  
8 hereunder does not constitute "production of groundwater" within the meaning of Water  
9 Code Section 60317 and that no Replenishment Assessment shall be levied on the  
10 extraction of Stored Water. WRD has stipulated to the same. This determination reflects  
11 the practical application of certain provisions of this Judgment concerning storage of  
12 water, including, without limitation, understanding the following: (1) payment of the  
13 Replenishment Assessment is required upon the conversion of Carryover Water into  
14 storage, and; (2) developed water introduced into the Basin for storage by or on behalf of  
15 a Party through spreading or injection need not be replenished by WRD and should not  
16 be subject to the Replenishment Assessment.

17 H. Storage Procedure.

18 The Administrative Body shall (i) prescribe forms and procedures for the orderly  
19 reporting of Stored Water, (ii) maintain records of all water stored in the Basin, and (iii)  
20 undertake monitoring and modeling of Stored Water as may be reasonably required. As  
21 to any Storage Projects that will require review and approval by the Storage Panel, the  
22 Administrative Body shall provide appropriate applications, and shall work with project  
23 applicants to complete the application documents for presentation to the Storage Panel.  
24 The Administrative Body shall be responsible for conducting any groundwater modeling  
25 necessary to evaluate a proposed Storage Project. The proponent of a proposed project  
26 will bear all costs associated with the review of the application for approval of the project  
27 and all costs associated with its implementation. Nothing in this Judgment shall alter the  
28 applicant(s) duty to comply with CEQA or to meet other legal requirements as to any

1 proposed Storage Project. Within thirty (30) days after final submission of the storage  
2 application documents, the Administrative Body shall provide notice of the storage  
3 application (either by electronic mail or U.S. postal mail), together with a copy of the  
4 application documents, to all parties possessing an Allowed Pumping Allocation, and to  
5 any other person requesting notice thereof. Following notice, any necessary hearings  
6 before the Storage Panel shall be conducted as provided in Section IV(O) of this  
7 Judgment.

8 I. Loss of Stored Water/Relative Priority.

9 To balance the need to protect priority uses of storage and to encourage the full  
10 utilization of Adjudicated Storage Capacity and Basin Operating Reserve where it can be  
11 accommodated without interference with priority uses, and except as otherwise provided  
12 in this Judgment, no water held in any authorized storage account will be deemed lost  
13 from that storage account unless the cumulative quantity of water held as Stored Water  
14 plus the quantity of water held within the Basin Operating Reserve exceeds 330,000  
15 acre-feet. Where all Adjudicated Storage Capacity and Basin Operating Reserve has  
16 been occupied, the first Stored Water to be deemed lost shall be the last water stored as  
17 Community Storage. Upon receipt of a bona fide request by another use entitled to  
18 priority hereunder, Watermaster shall issue a notice requiring the other parties to  
19 evacuate their Stored Water. Any Stored Water that is not evacuated shall be deemed  
20 dedicated to the Basin Operating Reserve in furtherance of the physical solution without  
21 compensation and accounted for accordingly.

22 J. Limits on Extraction.

23 Anything in this Judgment to the contrary notwithstanding, no party shall extract  
24 greater than 140% of the sum of (i) the party's Allowed Pumping Allocation and (ii) the  
25 party's leased water, except upon prior approval by the Water Rights Panel. For this  
26 purpose, a party's total extraction right for a particular year shall include that party's  
27 Allowed Pumping Allocation and any contractual right through lease or other means to  
28 utilize the adjudicated rights of another party. Where such proposed extraction would

1 occur within the Central Basin Pressure Area as defined by Watermaster consistent with  
2 historical records, the Water Rights Panel shall submit such request for review by the  
3 Board of WRD. The Water Rights Panel shall not approve any request for over-  
4 extraction within the Pressure Area without a written finding by the Board of WRD that  
5 such over-extraction will not cause Material Physical Harm. The role of the Board of  
6 WRD in this process shall not be read to expand or restrict WRD's statutory authority.  
7 Consideration shall be on an expedited basis.

8 K. Increased Extractions in the Central Basin for Certain Water Purveyors.

9 (1) This Court also maintains continuing jurisdiction over the West  
10 Coast Basin, which bounds the Central Basin to the west.

11 (2) Certain Water Purveyors are parties to both this Amended  
12 Judgment and the judgment governing the West Coast Basin and serve  
13 communities overlying both the Central Basin and the West Coast Basin.

14 (3) Certain Water Purveyors may exceed their Allowed Pumping  
15 Allocation in any Administrative Year, subject to all of the following conditions:

16 (a) The Water Purveyor is one of the following eligible Parties:

17 (i) City of Los Angeles

18 (ii) Golden State Water Company

19 (iii) California Water Service Company.

20 (b) Increased extractions pursuant to this Section shall not  
21 exceed 5,000 acre-feet per Water Purveyor for the particular  
22 Administrative Year.

23 (c) Increased extractions pursuant to this Section shall not  
24 exceed the Water Purveyor's unused "Adjudicated Rights" in the West  
25 Coast Basin.

26 (d) Increased extractions pursuant to this Section shall not  
27 result in Material Physical Harm.

28 (4) Notwithstanding the foregoing, nothing herein permits extraction

1 of water within the Central Basin in excess of 140% of Allowed Pumping  
2 Allocation for the particular Administrative Year, except as otherwise permitted  
3 under this Judgment.

4 (5) Replenishment of any water extracted from the Central Basin  
5 pursuant to this Section shall occur exclusively in the Central Basin.

6 (6) The benefits of this Section are made available only to the certain  
7 Water Purveyors that serve communities overlying the Central Basin and  
8 communities overlying the West Basin, in recognition of the management of  
9 water resources by those Water Purveyors to serve such overlying communities.  
10 It is not made, nor is it related to, a determination of an underflow between the  
11 basins, a cost or benefit allocation, or any other factor relating to the allocation of  
12 the Replenishment Assessment.

13 L. Special Provisions for Temporary Storage within Community Storage  
14 Pool.

15 The Central Basin Municipal Water District (“CBMWD”) shall take such action  
16 as may be necessary to reduce its Allowed Pumping Allocation to five (5) acre-feet or  
17 fewer by December 31, 2018, and has agreed, by stipulation, not to acquire any  
18 additional Central Basin water rights. Upon application by CBMWD, the Storage Panel  
19 may, after making each of the findings required in this subsection, approve storage of  
20 water by CBMWD within the Community Storage Pool subject to the stated conditions.  
21 The Storage Panel may only authorize such storage after finding each of the following to  
22 be true as of the date of such approval:

23 (1) CBMWD (a) then owns five (5) acre-feet or fewer of Allowed  
24 Pumping Allocation, and (b) has not produced water utilizing any extraction  
25 rights it holds within the Basin but has only engaged in the sale or leasing of those  
26 rights to others.

27  
28 (2) There is available space for Storage within the Community Storage

1 Pool.

2  
3 (3) CBMWD has identified a source of imported water that may be  
4 brought into the Basin and stored underground.

5 (4) The water identified for storage (a) is unlikely to be acquired by  
6 other parties through surface delivery for use within the Basin, and (b) was  
7 offered to WRD to purchase for replenishment purposes at the same price that  
8 CBMWD otherwise sells imported water to WRD and WRD declined to purchase  
9 said water, within a reasonable period of time.

10  
11 (5) There will be no Material Physical Harm associated with the  
12 introduction of the water into storage, or its extraction, in the manner approved by  
13 the Storage Panel.

14 The condition expressed in Section IV(L)(1)(a) above shall not be operative until  
15 January 1, 2019, or upon reduction of CBMWD's Allowed Pumping Allocation  
16 to five (5) acre-feet or fewer, whichever first occurs. CBMWD may not extract  
17 the Stored Water, and may instead only transfer that Stored Water to a party  
18 having extraction rights, or to WRD for replenishment purposes only. Such  
19 Stored Water not so transferred within three (3) years following its storage may  
20 be purchased by WRD, at its option, for replenishment purposes only, at a price  
21 not exceeding the actual cost incurred by CBMWD in importing and storing the  
22 water in the first instance, plus a reasonable administrative charge for overhead  
23 not exceeding five percent (5%) of the price paid by CBMWD for the water with  
24 no other fees or markups imposed by CBMWD. Except as otherwise permitted in  
25 this Section, any such Stored Water held by CBMWD for a term greater than  
26 three (3) years shall be assessed an annual water loss equal to 10% of the amount  
27 of such Stored Water at the end of each year. Water subject to the loss  
28

1 assessment will be deemed dedicated to the Basin Operating Reserve in  
2 furtherance of the physical solution without further compensation. The Storage  
3 Panel shall grant CBMWD one or more extensions of such term, not exceeding  
4 total extensions of three (3) additional years, following public hearing, if the  
5 Storage Panel determines that the Stored Water has been actively marketed by  
6 CBMWD for transfer to Parties on reasonable terms in the previous year. The  
7 Storage Panel may impose such additional reasonable conditions as it determines  
8 to be appropriate. Any review by the Storage Panel hereunder shall only occur at  
9 a public hearing held following at least 15 days' (but not more than 30 days')  
10 mailed notice to all Parties to this Judgment, at which hearing an opportunity for  
11 public comment shall be afforded in advance of any such decision. However, the  
12 Storage Panel may consider an application on shorter notice under exigent  
13 circumstances, including the potential loss of the water proposed to be stored if  
14 action is not taken sooner. CBMWD shall have the right to appeal any action or  
15 inaction by the Storage Panel to this court. The storage and extraction of Stored  
16 Water hereunder shall otherwise be subject to all other provisions of this  
17 Judgment. The court finds and declares that this subsection constitutes a "court  
18 order issued by a court having jurisdiction over the adjudication of groundwater  
19 extraction rights within the groundwater basin where storage is sought" within the  
20 meaning of Water Code §71610(b)(2)(B). Nothing in this provision impedes  
21 CBMWD's ability to store water pursuant to a contract with an adjudicated  
22 groundwater extraction rights holder as permitted by Water Code  
23 § 71610(b)(2)(A) and otherwise in accordance with this Judgment.

24 M. Basin Operating Reserve.

25 It is in the public interest and in furtherance of the physical solution for WRD to  
26 prudently exercise its statutory discretion to purchase, spread, and inject Replenishment  
27 Water, to provide for in-lieu replenishment, and otherwise to fulfill its replenishment  
28 function within the Basin as provided in Water Code Section 60000 et. seq. Hydrologic,

1 regulatory and economic conditions now prevailing within the State require that WRD be  
2 authorized to exercise reasonable discretion and have flexibility in the accomplishment  
3 of its replenishment function. Accordingly, WRD may pre-purchase or defer the  
4 purchase of Replenishment Water, and may otherwise purchase and manage available  
5 sources of Replenishment Water under the most favorable climatic and economic  
6 conditions as it may determine reasonable and prudent under the circumstances. It is the  
7 intent of the parties to preserve space for such replenishment activities, including capture  
8 of natural inflows during wet years, recapture of water when possible, and artificial  
9 replenishment when water is available at discounted rate, for the benefit of the Basin and  
10 the parties to the Judgment. The Basin Operating Reserve is intended to allow WRD to  
11 meet its replenishment needs to make APA available for extraction by all water rights  
12 holders. Accordingly, WRD shall have a priority right to occupy up to 110,000 acre-feet  
13 of the Available Dewatered Space as the “Basin Operating Reserve” for the acquisition  
14 and replenishment of water, or to ensure space remains available in the Basin to capture  
15 natural inflows during wet years for the benefit of the parties to the Judgment, to offset  
16 over-production. The priority right is not intended to allow WRD to sell or lease stored  
17 water, storage, or water rights. To the extent WRD does not require the use of all of such  
18 Basin Operating Reserve, that portion of the Basin Operating Reserve that is not then  
19 being used shall be available to other Parties to store water on a temporary and space-  
20 available basis. No Party may use any portion of the Basin Operating Reserve for space-  
21 available storage unless that Party has already maximized its allowed Storage pursuant to  
22 its Individual Storage Allocation and all available Community Storage is already in use.  
23 WRD’s failure to use any portion of its Basin Operating Reserve shall not cause  
24 forfeiture or create a limitation of its right to make use of the designated space in the  
25 future. WRD’s first priority right to this category of space shall be absolute. To the  
26 extent that there is a conflict between WRD and a third party regarding the availability of  
27 and desire to use any portion of the space available for replenishment up to the maximum  
28 limits set forth in this section, the interests of WRD will prevail. If a party other than

1 WRD is using the Basin Operating Reserve space on a “space available” basis and a  
2 conflict develops between WRD and the storing party, the storing party will, upon notice  
3 from WRD, evacuate the Stored Water within ninety (90) days thereafter. In such event,  
4 temporary occupancy within the Basin Operating Reserve shall be first in time, first in  
5 right, and the last Party to store water shall be required to evacuate first until adequate  
6 space shall be made available within the Basin Operating Reserve to meet WRD’s needs.  
7 The storing party or parties assume all risks of waste, spill and loss regardless of the  
8 hardship. Stored Water that is not evacuated following WRD’s notice of intent to occupy  
9 the Basin Operating Reserve will be deemed dedicated to the Basin Operating Reserve in  
10 furtherance of the physical solution without compensation and accounted for  
11 accordingly. Nothing herein shall permit WRD to limit or encumber, by contract or  
12 otherwise, its right to use the Basin Operating Reserve for Replenishment purposes for  
13 any reason, or to make space therein available to any person by any means.  
14 Notwithstanding the foregoing, to the extent excess space is available, water evacuated  
15 from the Basin Operating Reserve as provided in this Section shall be deemed added to  
16 available space within the Individual Storage Allocations and Community Storage Pool,  
17 subject to the priority rights otherwise provided in this Judgment.

18 N. Water Augmentation.

19 The parties, in coordination with WRD, may undertake projects that add to the  
20 long-term reliable yield of the Basin. Innovations and improvements in practices that  
21 increase the conservation and maximization of the reasonable and beneficial use of water  
22 should be promoted. To the extent that Parties to the Judgment, in coordination with  
23 WRD, implement a project that provides additional long-term reliable water supply to the  
24 Central Basin, the annual extraction rights in the Central Basin will be increased  
25 commensurately in an amount to be determined by the Storage Panel to reflect the actual  
26 yield enhancement associated with the project. Augmented supplies of water resulting  
27 from such a project may be extracted or stored as permitted in this Judgment in the same  
28 manner as other water. Participation in any Water Rights Augmentation Project shall be

1 voluntary. A party may elect to treat a proposed project as a Water Augmentation  
2 Project (for the purpose of seeking an increase in that party's Allowed Pumping  
3 Allocation) or may elect to treat such a project as a Storage Project under the other  
4 provisions of this Judgment. The terms of participation in any Water Augmentation  
5 Project will be at the full discretion of the participating parties. All Water Augmentation  
6 Projects will be approved by the Storage Panel.

7 (1) Participating Parties.

8 Parties who propose a Water Augmentation Project ("Project Leads") may  
9 do so in their absolute discretion, upon such terms as they may determine. All  
10 other parties to this Judgment will be offered an opportunity to participate in the  
11 Water Augmentation Project on condition that they share proportionally in  
12 common costs and benefits, and assume the obligation to bear exclusively the cost  
13 of any improvements that are required to accommodate their individual or  
14 particular needs. Notice shall be provided which generally describes the project  
15 and the opportunity to participate with sufficient time for deliberation and action  
16 by any of these parties who could potentially participate. Disputes over the  
17 adequacy of notice shall be referred to the Storage Panel, and then to the Court  
18 under its continuing jurisdiction. Parties who elect to participate ("Project  
19 Participants") may do so provided they agree to offer customary written and  
20 legally binding assurances that they will bear their proportionate costs attributable  
21 to the Water Rights Augmentation Project, or provide other valuable  
22 consideration deemed sufficient by the Project Leads and the Project Participants.

23 (2) Determination of Additional Extraction Rights.

24 The amount of additional groundwater extraction as a result of a Water  
25 Augmentation project will be determined by the Storage Panel, subject to review  
26 by the Court. The determination will be based upon substantial evidence which  
27 supports the finding that the Water Augmentation project will increase the long-  
28 term sustainable yield of the respective Basin by an amount at least equal to the

1 proposed increase in extraction rights.

2 (3) Increase in Extraction Rights.

3 A party that elects to participate and pays that party's full pro-rata share of  
4 costs associated with any Water Augmentation Project and/or reaches an  
5 agreement with other participants based upon other valuable consideration  
6 acceptable to the Project Leads and Project Participants, will receive a  
7 commensurate increase in extraction rights. Non-participating parties will not  
8 receive an increase or a decrease in extraction rights. Any party that elects not to  
9 participate will not be required to pay any of the costs attributable to the particular  
10 Water Augmentation Project, whether directly or indirectly as a component of the  
11 WRD Replenishment Assessment.

12 (4) Nominal Fluctuations.

13 Because water made available for Water Rights Augmentation will be  
14 produced annually, fluctuations in groundwater levels will be temporary, nominal  
15 and managed within the Basin Operating Reserve.

16 (5) Availability of New Water.

17 The amount of additional groundwater extraction established as a result of  
18 a Water Augmentation Project shall be equal to the quantity of new water in the  
19 Basin that is attributable to that Water Augmentation Project. No extraction shall  
20 occur and no extraction right shall be established until new water has been  
21 actually introduced into the Basin as a result of the Project. Any approval for a  
22 Water Augmentation Project shall include provisions (a) requiring regular  
23 monitoring to determine the actual amount of such new water made available, (b)  
24 requiring make-up water or equivalent payment therefor to the extent that actual  
25 water supply augmentation does not meet projections, and (c) adjusting extraction  
26 rights attributable to the Water Augmentation Project to match the actual water  
27 created. The right to extract augmented water from the Basin resulting from a  
28 party's participation in a Water Augmentation Project shall be accounted for

1 separately and shall not be added to a party's Allowed Pumping Allocation. No  
2 Replenishment Assessment shall be levied against the extraction of augmented  
3 water.

4 (6) Limitation.

5 Notwithstanding the foregoing, WRD will not obtain any water rights or  
6 extraction rights under this Judgment by virtue of its participation in a Water  
7 Augmentation Project. If WRD participates in a Water Rights Augmentation  
8 Project through funding or other investments, its allocation of new water from the  
9 project shall be used to offset its replenishment responsibilities.

10 O. Limits on Watermaster Review.

11 It shall not be necessary for Watermaster, or any constituent body thereof, to  
12 review or approve any of the following before the affected Party may proceed: (i)  
13 exercise of adjudicated water rights consistent with this Judgment, except for extraction  
14 above 140% of a Party's extraction right as set out in Section IV(J) of this Judgment; (ii)  
15 replenishment of the Basin with Replenishment Water by WRD consistent with Water  
16 Code Section 60000 et seq., including replenishment of water produced by water rights  
17 holders through the exercise of adjudicated water rights; (iii) WRD's operations within  
18 the Basin Operating Reserve; (iv) Carryover Conversion or other means of the filling of  
19 the Individual Storage Accounts and the Community Storage Pool, as provided in this  
20 Judgment, as long as existing water production, spreading, or injection facilities are used;  
21 and (v) individual transfers of the right to produce Stored Water as permitted in Section  
22 IV(F). All other Storage Projects and all Water Augmentation Projects shall be subject  
23 to review and approval as provided herein, including (i) material variances to substantive  
24 criteria governing projects exempt from the review and approval process, (ii)  
25 modifications to previously approved Storage Projects and agreements, (iii) a party's  
26 proposal for Carryover Conversion in quantities greater than the express apportionment  
27 of Adjudicated Storage Capacity on a non-priority, space-available, interim basis, and  
28 (iv) Storage, by means other than Carryover Conversion, when new production,

1 spreading, or injection facilities are proposed to be utilized.

2 P. Hearing Process For Watermaster Review.

3 The following procedures shall be followed by Watermaster where Watermaster  
4 review of storage or extraction of Stored Water is required or permitted under this  
5 Judgment:

6 (1) No later than thirty (30) days after notice has been issued for the  
7 storage application, the matter shall be set for hearings before the Storage Panel.  
8 A staff report shall be submitted by WRD staff in conjunction with the completed  
9 storage application documents and the Water Rights Panel may prepare an  
10 independent staff report, if it elects to do so.

11 (2) The Board of WRD and the Water Rights Panel (sitting jointly as  
12 the Storage Panel) shall conduct a joint hearing concerning the storage  
13 application.

14 (3) All Watermaster meetings shall be conducted in the manner  
15 prescribed by the applicable Rules and Regulations. The Rules shall provide that  
16 all meetings of Watermaster shall be open to water rights holders and that  
17 reasonable notice shall be given of all meetings.

18 (4) The Board of WRD and the Water Rights Panel shall each adopt  
19 written findings explaining its decision on the proposed Storage Project, although  
20 if both entities reach the same decision on the Storage Project, they shall work  
21 together to adopt a uniform set of findings.

22 (5) Unless both the Board of WRD and the Water Rights Panel  
23 approve the Storage Project, the Storage Project application shall be deemed  
24 denied (a "Project Denial"). If both the Board of WRD and the Water Rights  
25 Panel approve the Storage Project, the Storage Project shall be deemed approved  
26 (a "Project Approval").

27 Q. Trial Court Review

28 (1) The applicant may seek the Storage Panel's reconsideration of a

1 Project Denial. However, there shall be no process for mandatory reconsideration  
2 or mediation of a Project Approval or a Project Denial either before the  
3 Administrative Body, or before the Water Rights Panel.

4 (2) Any Party may file an appeal from a Project Approval or Project  
5 Denial with this Court, as further described in Section II(F).

6 (3) In order to (a) promote the full presentation of all relevant  
7 evidence before the Storage Panel in connection with its consideration of any  
8 proposed Storage Project, (b) achieve an expeditious resolution of any appeal to  
9 the Court, and (c) accord the appropriate amount of deference to the expertise of  
10 the Storage Panel, the appeal before the Court shall be based solely on the  
11 administrative record, subject only to the limited exception in California Code of  
12 Civil Procedure section 1094.5(e).

13 (4) If both the WRD Board and the Water Rights Panel each vote to  
14 deny or approve a proposed Storage Project, it shall be an action by the Storage  
15 Panel and that decision shall be accorded by the Court deference according to the  
16 substantial evidence test. If one of the reviewing bodies votes to approve the  
17 proposed Storage Project and the other reviewing body votes to deny the proposed  
18 storage project, then the Court's review shall be *de novo*, although still restricted  
19 to the administrative record. In the case of any *de novo* Trial Court review, the  
20 findings made by the respective Watermaster bodies shall not be accorded any  
21 weight independent of the evidence supporting them.

22 R. Space Available Storage, Relative Priority, and Dedication of "Spilled"  
23 Water.

24 To balance the need to protect priority uses of storage and to encourage the full  
25 utilization of Available Dewatered Space within the Adjudicated Storage Capacity and  
26 the Basin Operating Reserve, any Party may make interim, temporary use of then  
27 currently unused Available Dewatered Space within any category of Adjudicated Storage  
28 Capacity, and then if all Adjudicated Storage Capacity is being fully used for Stored

1 Water within the Basin Operating Reserve (“Space-Available Storage”), subject to the  
2 following criteria:

3 (1) Any Party may engage in Space-Available Storage without prior  
4 approval from Watermaster provided that the storing Party or Parties shall assume  
5 all risks of waste, spill, and loss regardless of the hardship. Whenever the Storage  
6 Panel determines that a Party is making use of excess Available Dewatered Space  
7 for Space-Available Storage, the Storage Panel shall issue written notice to the  
8 Party informing them of the risk of spill and loss.

9 (2) Whenever the Available Dewatered Space is needed to  
10 accommodate the priority use within a respective category of Adjudicated Storage  
11 Capacity, or WRD seeks to make use of its priority right to the Basin Operating  
12 Reserve to fulfill its replenishment function, the Storage Panel shall issue a notice  
13 to evacuate the respective category of Adjudicated Storage Capacity or Basin  
14 Operating Reserve, as applicable, within the time-periods set forth within this  
15 Amended Judgment. To the extent the Stored Water is not timely evacuated such  
16 Stored Water will be placed into any other excess Available Dewatered Space,  
17 first within the Adjudicated Storage Capacity, if available, and then if all  
18 Adjudicated Storage Capacity is being fully used for Stored Water within the  
19 Basin Operating Reserve. If no excess Available Dewatered Space is available  
20 within the Basin Operating Reserve, then the Stored Water shall be deemed  
21 spilled and will be deemed dedicated to the Basin Operating Reserve in  
22 furtherance of the physical solution without compensation and accounted for  
23 accordingly. A Party that seeks to convert the Stored Water temporarily held in  
24 interim storage as Space-Available Storage to a more firm right, may in its  
25 discretion, contract for the use of another Party’s Individual Storage Allocation,  
26 or may add such water to the Community Storage Pool once space therein  
27 becomes available.

28 (3) No Stored Water will be deemed abandoned unless the cumulative

1 quantity of water held as Stored Water plus the quantity of water held in the Basin  
2 Operating Reserve exceeds 330,000 (three hundred and thirty thousand) acre-feet  
3 in the Central Basin.  
4

5 V. CONTINUING JURISDICTION OF THE COURT.

6 The Court hereby reserves continuing jurisdiction and upon application of any interested  
7 party, or upon its own motion, may review and redetermine the following matters and any  
8 matters incident thereto:

9 A. Its determination of the permissible level of extractions from Central  
10 Basin in relation to achieving a balanced basin and an economic utilization of Central  
11 Basin for groundwater storage, taking into account any then anticipated artificial  
12 replenishment of Central Basin by governmental agencies for the purpose of alleviating  
13 what would otherwise be annual overdrafts upon Central Basin and all other relevant  
14 factors.

15 B. Whether in accordance with applicable law any party has lost all or any  
16 portion of his rights to extract groundwater from Central Basin and, if so, to ratably  
17 adjust the Allowed Pumping Allocations of the other parties and ratably thereto any  
18 remaining Allowed Pumping Allocation of such party.

19 C. To remove any Watermaster or constituent body appointed from time to  
20 time and appoint a new Watermaster; and to review and revise the duties, powers and  
21 responsibilities of the Watermaster or its constituent bodies and to make such other and  
22 further provisions and orders of the Court that may be necessary or desirable for the  
23 adequate administration and enforcement of the Judgment.

24 D. To revise the price to be paid by Exchangees and to Exchangors for  
25 Exchange Pool purchases and subscriptions.

26 E. In case of emergency or necessity, to permit extractions from Central  
27 Basin for such periods as the Court may determine: (i) ratably in excess of the Allowed  
28 Pumping Allocations of the parties; or (ii) on a non-ratable basis by certain parties if

1 either compensation or other equitable adjustment for the benefit of the other parties is  
2 provided. Such overextractions may be permitted not only for emergency and necessity  
3 arising within Central Basin area, but to assist the remainder of the areas within The  
4 Metropolitan Water District of Southern California in the event of temporary shortage or  
5 threatened temporary shortage of its imported water supply, or temporary inability to  
6 deliver the same throughout its area, but only if the court is reasonably satisfied that no  
7 party will be irreparably damaged thereby. Increased energy cost for pumping shall not  
8 be deemed irreparable damage. Provided, however, that the provisions of this  
9 subparagraph will apply only if the temporary shortage, threatened temporary shortage,  
10 or temporary inability to deliver was either not reasonably avoidable by the Metropolitan  
11 Water District, or if reasonably avoidable, good reason existed for not taking the steps  
12 necessary to avoid it.

13 F. To review actions of the Watermaster.

14 G. To assist the remainder of the areas within The Metropolitan Water  
15 District of Southern California within the parameter set forth in subparagraph (e) above.

16 H. To provide for such other matters as are not contemplated by the Judgment  
17 and which might occur in the future, and which if not provided for would defeat any or  
18 all of the purposes of this Judgment to assure a balanced Central Basin subject to the  
19 requirements of Central Basin Area for water required for its needs, growth and  
20 development.

21 The exercise of such continuing jurisdiction shall be after 30 days' notice to the parties,  
22 with the exception of the exercise of such continuing jurisdiction in relation to subparagraphs E  
23 and G above, which may be *ex parte*, in which event the matter shall be forthwith reviewed  
24 either upon the Court's own motion or the motion of any party upon which 30 days' notice shall  
25 be so given. Within ten (10) days of obtaining any *ex parte* order, the party so obtaining the  
26 same shall mail notice thereof to the other parties. If any other party desires Court review  
27 thereof, the party obtaining the *ex parte* order shall bear the reasonable expenses of mailing  
28 notice of the proceedings, or may in lieu thereof undertake the mailing. Any contrary or

1 modified decision upon such review shall not prejudice any party who relied on said *ex parte*  
2 order.

3  
4 VI. GENERAL PROVISIONS.

5 A. Judgment Constitutes Inter Se Adjudication.

6 This Judgment constitutes an inter se adjudication of the respective rights of all  
7 parties, except as may be otherwise specifically indicated in the listing of the water rights  
8 of the parties of this Judgment, or in Appendix “2” hereof. All parties to this Judgment  
9 retain all rights not specifically determined herein, including any right, by common law  
10 or otherwise, to seek compensation for damages arising out of any act or omission of any  
11 person. This Judgment constitutes a “court order” within the meaning of Water Code  
12 Section 71610(B)(2)(b).

13 B. Assignment, Transfer, Etc., of Rights.

14 Subject to the other provision of this Judgment, and any rules and regulations of  
15 the Watermaster requiring reports relative thereto, nothing herein contained shall be  
16 deemed to prevent any party hereto from assigning, transferring, licensing or leasing all  
17 or any portion of such water rights as it may have with the same force and effect as  
18 would otherwise be permissible under applicable rules of law as exist from time to time.

19 C. Service Upon and Delivery to Parties of Various Papers.

20 Service of the Judgment on those parties who have executed that certain  
21 Stipulation and Agreement for Judgment or who have filed a notice of election to be  
22 bound by the Exchange Pool provisions shall be made by first class mail, postage  
23 prepaid, addressed to the designee and at the address designated for that purpose in the  
24 executed and filed Counterpart of the Stipulation and Agreement for Judgment or in the  
25 executed and filed “Notice of Election to be Bound by Exchange Pool Provisions,” as the  
26 case may be, or in any substitute designation filed with the Court.

27 Each party who has not heretofore made such a designation shall, within 30 days  
28 after the Judgment shall have been served upon that party, file with the Court, with proof

1 of service of a copy upon the Watermaster, a written designation of the person to whom  
2 and the address at which all future notices, determinations, requests, demands, objections,  
3 reports and other papers and processes to be served upon that party or delivered to that  
4 party are to be so served or delivered.

5 A later substitute designation filed and served in the same manner by any party  
6 shall be effective from the date of filing as to the then future notices, determinations,  
7 requests, demands, objections, reports and other papers and processes to be served upon  
8 or delivered to that party.

9 Delivery to or service upon any party by the Watermaster, by any other party, or  
10 by the Court, or any item required to be served upon or delivered to a party under or  
11 pursuant to the Judgment may be by deposit in the mail, first class, postage prepaid,  
12 addressed to the designee and at the address in the latest designation filed by that party.

13 D. Judgment Does Not Affect Rights, Powers, Etc., of Plaintiff District.

14 Nothing herein constitutes a determination or adjudication which shall foreclose  
15 Plaintiff District from exercising such rights, powers, privileges and prerogatives as it  
16 may now have or may hereafter have by reason of provisions of law.

17 E. Continuation of Order under Interim Agreement.

18 The order of Court made pursuant to the “Stipulation and Interim Agreement and  
19 Petition for Order” shall remain in effect through the Administrative Year in which this  
20 Judgment shall become final (subject to the reserved jurisdiction of the Court).

21 F. Effect of Extractions by Exchangees; Reductions in Extractions.

22 With regard to Exchange Pool purchases, the first extractions by each Exchangee  
23 shall be deemed the extractions of the quantities of water which that party is entitled to  
24 extract pursuant to his allocation from the Exchange Pool for that Administrative Year.  
25 Each Exchangee shall be deemed to have pumped his Exchange Pool request so allocated  
26 for and on behalf of each Exchangor in proportion to each Exchangor’s subscription to  
27 the Exchange Pool which is utilized to meet Exchange Pool requests. No Exchangor  
28 shall ever be deemed to have relinquished or lost any of its rights determined in this

1 Judgment by reason of allocated subscriptions to the Exchange Pool. Each Exchangee  
2 shall be responsible as between Exchangors and that Exchangee, for any tax or  
3 assessment upon the production of groundwater levied for replenishment purposes by  
4 WRD or by any other governmental agency with respect to water extracted by such  
5 Exchangee by reason of Exchange Pool allocations and purchases. No Exchangor or  
6 Exchangee shall acquire any additional rights, with respect to any party to this action, to  
7 extract waters from Central Basin pursuant to Water Code Section 1005.1 by reason of  
8 the obligations pursuant to and the operation of the Exchange Pool.

9 G. Judgment Binding on Successors, Etc.

10 This Judgment and all provisions thereof are applicable to and binding upon not  
11 only the parties to this action, but as well to their respective heirs, executors,  
12 administrators, successors, assigns, lessees, licensees and to the agents, employees and  
13 attorneys in fact of any such persons.

14 H. Costs.

15 No party shall recover its costs herein as against any other party.

16 I. Intervention of Successors in Interest and New Parties.

17 Any person who is not a party (including but not limited to successors or parties  
18 who are bound by this Judgment) and who proposes to produce water from the Basin,  
19 store water in the Basin, or exercise water rights of a predecessor may seek to become a  
20 party to this Judgment through a Stipulation in Intervention entered into with the  
21 Plaintiff. Plaintiff may execute said Stipulation on behalf of the other parties herein, but  
22 such Stipulation shall not preclude a party from opposing such intervention at the time of  
23 the court hearing thereon. Said Stipulation for Intervention must thereupon be filed with  
24 the Court, which will consider an order confirming said intervention following thirty (30)  
25 days' notice to the parties. Thereafter, if approved by the Court, such intervenor shall be  
26 a party bound by this Judgment and entitled to the rights and privileges accorded under  
27 the physical solution herein.

28 J. Effect of this Amended Judgment on Orders Filed Herein.

1 This Third Amended Judgment shall not abrogate such rights of additional  
2 carryover of unused water rights as may otherwise exist pursuant to orders herein filed  
3 June 2, 1977 and September 29, 1977.  
4

5 THE CLERK WILL ENTER THIS THIRD AMENDED JUDGMENT FORTHWITH.  
6

7 DATED: 12-23-13  
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9 ABRAHAM KHAN  
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11 Judge of the Superior Court  
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APPENDIX 1  
Description of Central Basin Area

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That certain area in the County of Los Angeles, State of California, situated within the following exterior boundaries:

1. Commencing at the southernmost corner of the basin at a point on the Los Angeles-Orange County boundary 2,000 feet, more or less, northeasterly of the intersection of the center line of Pacific Coast Highway with said County boundary;
2. Thence in a straight line along the trace of the Reservoir Hill Fault to a point about 650 feet north and about 700 feet east of the intersection of Anaheim Street and Ximeno Avenue;
3. Thence in a straight line along the trace of said Reservoir Hill Fault to a point on the center line of Pacific Coast Highway, 650 feet west of the intersection of the center lines of said Pacific Coast Highway and Lakewood Boulevard;
4. Thence westerly along the center line of said Pacific Coast Highway to a point 300 feet west of its intersection with the center line of Obispo Avenue;
5. Thence in a straight line to a point about 400 feet east of the intersection of the center lines of Walnut and Creston Avenues;
6. Thence in a straight line along the escarpment of the Cherry Hill Fault to a point about 750 feet west and about 730 feet south of the intersection of Wardlow Road and Long Beach Boulevard;
7. Thence in a straight line to a point about 100 feet north and about 100 feet west of the intersection of Bixby Road and Del Mar Avenue;
8. Thence in a straight line extending through a point in the center line of Del Amo Boulevard about 900 feet west of the center line of the Pacific

APPENDIX "I"

Page 1  
( 14 Pages )

Electric Railway to a point in the center line of Alameda Street about 2,900 feet north of Del Amo Boulevard, the latter distance measured along the center line of Alameda Street;

9. Thence in a straight line along the crest of the Dominguez Hills to a point about 1,300 feet north and about 850 feet west of the intersection of the center lines of Central Avenue and Victoria Street;

10. Thence in a straight line along the escarpment of the Avalon-Compton Fault to a point about 700 feet west of the intersection of the center lines of Avalon Boulevard and Rosecrans Avenue;

11. Thence in a straight line to a point 400 feet north of the intersection of El Segundo Boulevard and Vermont Avenue and continuing in another straight line to a point 2,400 feet south and 1,000 feet east of the intersection of the center lines of Crenshaw and Century Boulevards, the latter point being the approximate southeasterly end of the escarpment of the Potrero Fault;

12. Thence in a straight line along the escarpment of the Potrero Fault and continuing to a point on Northridge Drive about 200 feet northeasterly of its intersection with Marvale Drive, measured along the center line of Northridge Drive;

13. Thence in a straight line to a point on the center line of Stocker Street 1,800 feet, more or less, northeasterly of the intersection of the center lines of Stocker Street and La Brea Avenue, measured along the center line of Stocker Street;

14. Thence easterly along said last mentioned center line and continuing along said center line, following the same in all its various courses and curves to its first intersection with the boundary line of said City of Los Angeles, being a boundary line in that certain annexation to the City of Los Angeles on April 22, 1948, designated Angeles Mesa Addition No. 5;

15. Thence southeasterly along said boundary line of the City of Los Angeles and continuing along the boundary line of said City of Los Angeles, following the same in all its various courses and curves, to an angle point in said boundary line of the City of Los Angeles being also an angle point in the boundary line of that certain territory annexed to the City of Los Angeles September 18, 1946 and known as Mesa Addition No. 3, said angle point being at the intersection of the southeasterly line of Stocker Avenue, 80 feet wide, as said Stocker Avenue is described in deed to the County of Los Angeles, recorded in Book 13445, page 197, of Official Records, in the office of said Recorder, with the westerly boundary line of that certain territory annexed to the City of Los Angeles July 27, 1922 and known as the Angeles Mesa Addition;

16. Thence northeasterly in a direct line to the intersection of the center line of Stocker Avenue, 80 feet wide, as shown on map of Tract No. 10023, recorded in Book 150, page 46, of Maps, in the office of said Recorder, with that certain center line of Crenshaw Boulevard, formerly Angeles Mesa Drive, 60 feet wide, shown on said map of Tract No. 10023 as the center line of Angeles Mesa Drive per book 6053, page 120, of Deeds;

17. Thence northerly along said certain center line of Crenshaw Boulevard, formerly Angeles Mesa Drive, 60 feet wide, to the southerly line of the northerly 30 feet of Santa Barbara Avenue, 75 feet wide, shown on said map of Tract No. 10023 as the line described in deed recorded in Book 347, page 35, of Official Records;

18. Thence easterly along said line shown on said map of Tract No. 10023 as the line described in deed recorded in Book 347, page 35, of Official Records, to the easterly terminus thereof as shown on said map;

19. Thence northerly in a direct line to the southwesterly corner of Lot 273, Tract No. 809, as shown on map recorded in Book 16, page 74, of Maps, in the office of said Recorder, said southwesterly corner of Lot 273 being a point on the northerly line of the north roadway, 30 feet wide, of Santa Barbara Avenue, as shown on said last mentioned map;

20. Thence easterly along said northerly line of the north roadway, 30 feet wide, of Santa Barbara Avenue, to the southeasterly corner of Lot 52 of said Tract No. 809;

21. Thence in a direct line to the southwesterly corner of Lot 280, Tract No. 4463, as shown on map recorded in Book 48, page 31, of Maps, in the office of said Recorder, said southwesterly corner of Lot 280 being a point in the northerly line of the north roadway of Santa Barbara Avenue as shown on said last mentioned map;

22. Thence easterly along said northerly line of the north roadway of Santa Barbara Avenue to the southeasterly corner of Lot 39 of said Tract No. 4463;

23. Thence continuing easterly along said northerly line of the north roadway of Santa Barbara Avenue to the westerly line of Western Avenue, 60 feet wide, as shown on said map of Tract No. 4463;

24. Thence easterly in a direct line to the intersection of the easterly line of Western Avenue, 60 feet wide, with the northerly line of the north roadway of Santa Barbara Avenue, as said intersection is shown on map of Tract No. 2583, recorded in Book 32, page 58, of Maps, in the office of said Recorder;

25. Thence easterly along said northerly line of the north roadway of Santa Barbara Avenue to its intersection with the westerly line of Denker Avenue, 60 feet wide, as shown on said map of Tract No. 2583;

26. Thence easterly in a direct line to the southwesterly corner of Lot 7 of Dalton Avenue Square as shown on map recorded in Book 14, page 116, of Maps, in the office of said Recorder, said southwesterly corner being a point in the northerly line of the north roadway, 20 feet wide, of Santa Barbara Avenue, as shown on said last mentioned map;

27. Thence easterly along said northerly line of the north roadway, 20 feet wide, of Santa Barbara Avenue, to the southeasterly corner of Lot 56 of said Dalton Avenue Square;

28. Thence easterly in a direct line to the intersection of the center line of Normandie Avenue, 60 feet wide, with the southerly line of the northerly 30 feet of the north roadway, 45 feet wide, of Santa Barbara Avenue, as said intersection is shown on map of Tract No. 11593, recorded in Book 247, page 42, of Maps, in the office of said Recorder;

29. Thence easterly along said southerly line of the northerly 30 feet of the north roadway, 45 feet wide, of Santa Barbara Avenue to the center line of Vermont Avenue, 80 feet wide, as shown on said map of Tract No. 11593;

30. Thence easterly in a direct line to the southwesterly corner of Lot 10, Tract No. 2411, as shown on map recorded in Book 26, Page 77, of Maps, in the office of said Recorder, said southwesterly corner of Lot 10 being a point on the northerly line of the north roadway of Santa Barbara Avenue, as shown on said last mentioned map;

31. Thence easterly along said northerly line of the north roadway of Santa Barbara Avenue to the southeasterly corner of Lot 7 of said Tract No. 2411;

32. Thence easterly in a direct line to the southwesterly corner of Lot 1, Block A of Tract No. 4719, as shown on map recorded in Book 52, page 48, of Maps, in the office of said Recorder, said southwesterly corner of Lot 1, Block A, being a point on the northerly line of the north roadway of Santa Barbara Avenue as shown on said last mentioned map;

33. Thence easterly along said northerly line of the north roadway of Santa Barbara Avenue to the southeasterly corner of Lot 1, Block B, of said Tract No. 4719;

34. Thence southeasterly in a direct line to the intersection of the center line of Figueroa Street, 100 feet wide, with the center line of Santa Barbara Avenue, 60 feet wide, as said intersection is shown on Map of Bowen and Chamberlin's Main and Figueroa Street Tract No. 2, recorded in Book 7, page 5, of Maps, in the office of said Recorder;

35. Thence easterly along said center line of Santa Barbara Avenue, 60 feet wide, as shown on said map of Bowen and Chamberlin's Main and Figueroa Street Tract No. 2, to the center line of Broadway Place, formerly Moneta Avenue, 76 feet wide, as shown on said last mentioned map;

36. Thence easterly along the northerly line of the southerly 30 feet of Santa Barbara Avenue as shown on map of Main Street Boulevard Tract, recorded in Book 5, page 32, of Maps, in the office of said Recorder, to the center line of Main Street, 80 feet wide, as shown on said last mentioned map;

37. Thence easterly along the center line of Santa Barbara Avenue, 60 feet wide, as shown on Map of South Woodlawn, recorded in Book 4, page 5, of Maps, in the office of said Recorder, to the southeasterly line of the northwesterly 40 feet of San Pedro Street, as shown on said last mentioned Map;

38. Thence along said southeasterly line of the northwesterly 40 feet of San Pedro Street as shown on said Map of South Woodlawn to the center line of Santa Barbara Avenue, formerly Defiance Street, 60 feet wide, as shown on map of the Mettler Tract, recorded in Book 6, page 50, of Maps, in the office of said Recorder;

39. Thence easterly along said center line of Santa Barbara Avenue, formerly Defiance Street, 60 feet wide, to the center line of Griffith Avenue, 60 feet wide, as said Griffith Avenue is shown on said map of the Mettler Tract;

40. Thence southeasterly in a direct line to the point of intersection of the westerly line of McKinley Avenue, formerly Eureka Street, with the westerly prolongation of the center line of Santa Barbara Avenue, formerly Reno Street, 60 feet wide, as said streets are shown on Map of the Nadeau Orange Tract, recorded in Book 25, page 34, of Miscellaneous Records, in the office of said Recorder;

41. Thence easterly along said westerly prolongation and along said center line of Santa Barbara Avenue, formerly Reno Street, 60 feet wide, as said street is shown on said Map of the Nadeau Orange Tract, and continuing easterly along the easterly prolongation of said center line to the easterly line of Central Avenue, 80 feet wide, as shown on Map of Lienau's

Cottage Home Tract, recorded in Book 28, page 48, of Miscellaneous Records, in the office of said Recorder;

42. Thence northerly along said easterly line of Central Avenue, 80 feet wide, as shown on said map of Lienau's Cottage Home Tract, to the northwesterly corner of Lot 11, Block 1, of said Lienau's Cottage Home Tract; said northwesterly corner of Lot 11 being a point on the southerly line of Santa Barbara Avenue, formerly Herbert Street, as shown on said last mentioned map;

43. Thence easterly along said southerly line of Santa Barbara Avenue, formerly Herbert Street, to the northeasterly corner of Lot 1, Block 1, of said Lienau's Cottage Home Tract;

44. Thence easterly in a direct line to the northwesterly corner of Lot 1 of the Oakley's Home Tract, as shown on map recorded in Book 5, page 18, of Maps, in the office of said Recorder, said northwesterly corner of Lot 1 being a point on the southerly line of Santa Barbara Avenue, formerly 36th Street, 60 feet wide, as shown on said last mentioned map;

45. Thence easterly along said southerly line of Santa Barbara Avenue, formerly 36th Street, 60 feet wide, as shown on said map of Oakley's Home Tract and continuing easterly along the easterly prolongation of said southerly line to the westerly line of that certain tract of land shown on Plat Showing the Property of George Stephenson, recorded in Book 53, page 31, of Miscellaneous Records, in the office of said Recorder;

46. Thence southerly along said westerly line of said certain tract of land shown on Plat Showing the Property of George Stephenson to the southerly line of said certain tract of land, said southerly line being shown on said Plat as having a bearing of S 81° E and a distance of 7.03 chains;

47. Thence easterly along said southerly line of said certain tract of land to the southeasterly line of said certain tract of land, said southeasterly line being shown on said Plat as having a bearing of N 25° E and a distance of 18.84 chains;

48. Thence northeasterly along said southeasterly line of said certain tract of land, being also along the northwesterly line of Compton Avenue, formerly Orange Street, 60 feet wide, as shown on said Plat, to the westerly prolongation of the center line of Santa Barbara Avenue, formerly 30th Street, 60 feet wide, as shown on map of the Deeble Tract, recorded in Book 9, page 188, of Maps, in the office of said Recorder;

49. Thence easterly along said westerly prolongation and along said center line of Santa Barbara Avenue, formerly 30th Street, 60 feet wide, as

shown on said map of the Deeble Tract, to the westerly line of The Morgan Tract, as shown on map recorded in Book 5, page 5, of Maps, in the office of said Recorder;

50. Thence easterly in a direct line to the point of intersection of the easterly line of said Morgan Tract with the center line of Santa Barbara Avenue, formerly 30th Street, 50 feet wide, as said street is shown on Map of East Jefferson Street Tract No. 2, recorded in Book 7, page 92, of Maps, in the office of said Recorder;

51. Thence easterly along said center line of Santa Barbara Avenue, formerly 30th Street, 50 feet wide, and continuing easterly along the easterly prolongation of said center line of Santa Barbara Avenue to the east line of the west roadway, 40 feet wide, of Long Beach Avenue as shown on said map of East Jefferson Street Tract No. 2;

52. Thence easterly in a direct line to the point of intersection of the westerly line of the east roadway, 40 feet wide, of Long Beach Avenue as shown on Map of East Jefferson Street Tract No. 1, recorded in Book 7, page 113, of Maps, in the office of said Recorder, with the westerly prolongation of the center line of Santa Barbara Avenue, formerly 30th Street, 50 feet wide, as said street is shown on said last mentioned Map;

53. Thence easterly along said westerly prolongation and along said center line of Santa Barbara Avenue, formerly 30th Street, 50 feet wide, and continuing easterly along the easterly prolongation of said center line to the first intersection with the boundary line of the City of Los Angeles, said intersection being in Alameda Street;

54. Thence northerly and easterly along said boundary line of the City of Los Angeles to the easterly line of Alameda Street, 80 feet wide, as shown on map of Huntington Industrial Tract recorded in Book 6, page 10, of Maps, in the office of said Recorder;

55. Thence northerly along said easterly line of Alameda Street, 80 feet wide, as shown on said map of Huntington Industrial Tract to the northwesterly corner of Block A of said Huntington Industrial Tract;

56. Thence in a direct line to the southeasterly corner of Lot 73 of the Weiss Tract No. 2, as shown on map recorded in Book 2, page 42, of Maps, in the office of said Recorder, said southeasterly corner of Lot 73 being a point on the westerly line of Alameda Street, 80 feet wide, as shown on said last mentioned map;

57. Thence northerly along said westerly line of Alameda Street, 80 feet wide, to the northeasterly corner of Lot 62 of said Weiss Tract No. 2.

58. Thence northerly in a direct line to the southeasterly corner of Lot 189, Block A, of the Meade and Dalton Tract, as shown on map recorded in Book 37, page 50, of Miscellaneous Records, in the office of said Recorder, said southeasterly corner of Lot 189 being a point on the westerly line of Alameda Street, 80 feet wide, as shown on said last mentioned map;

59. Thence northerly along said westerly line of Alameda Street, 80 feet wide, to the northeasterly corner of Lot 1, Block A, of said Meade and Dalton Tract;

60. Thence easterly along the easterly prolongation of the northerly line of said Lot 1, Block A, of the Meade and Dalton Tract to the easterly line of Alameda Street, 80 feet wide, as shown on map of the Central Industrial Tract, recorded in Book 4, page 21, of Maps, in the office of said Recorder;

61. Thence northerly along said easterly line of Alameda Street, 80 feet wide, to the northwesterly corner of said Central Industrial Tract;

62. Thence continuing northerly along the easterly line of Alameda Street, 80 feet wide, as shown on map of the Hughes Manufacturing Co.'s Tract, recorded in Book 7, page 105, of Maps, in the office of said Recorder, to the southwesterly corner of Lot 7, Block A, of Ninth Street Tract Extension, as shown on map recorded in Book 55, page 89, of Miscellaneous Records, in the office of said Recorder;

63. Thence continuing northerly along the easterly line of Alameda Street as shown on said map of Ninth Street Tract Extension to northwesterly corner of Lot 1, Block A, of said Ninth Street Extension, said northwesterly corner of Lot 1 being a point on the easterly line of Alameda Street as shown on map of H. N. Elliott's Ninth Street Tract, recorded in Book 53, page 98, of Miscellaneous Records, in the office of said Recorder;

64. Thence continuing northerly along said easterly line of Alameda Street as shown on said map of H. N. Elliott's Ninth Street Tract and continuing northerly along the northerly prolongation of said easterly line to that certain line designated City Engineer's center line of Olympic Boulevard on map of Tract No. 11512, recorded in Book 221, page 29, of Maps, in the office of said Recorder;

65. Thence easterly along said certain line designated City Engineer's center line of Olympic Boulevard to the intersection with the center line of Mateo Street, as shown on said map of Tract No. 11512, said intersection being also shown on map of Tract No. 10068, recorded in Book 141, page 44, of Maps, in the office of said Recorder, as the intersection of the city center lines of Mateo Street, 60 feet wide, and Olympic Boulevard, formerly Ninth Street, 80 feet wide;

66. Thence continuing easterly along said city center line of Olympic Boulevard, formerly Ninth Street, 80 feet wide, to the intersection with the westerly prolongation of that certain center line of Olympic Boulevard shown on map filed in Book 52, page 5, of Record of Surveys, in the office of said Recorder, as having a bearing of North  $89^{\circ} 33' 00''$  West;

67. Thence easterly along said westerly prolongation and continuing easterly along said certain center line of Olympic Boulevard, shown on said map filed in Book 52, page 5, of Record of Surveys, as having a bearing of North  $89^{\circ} 33' 00''$  West, to the westerly line of the Official Bed of the Los Angeles River, as shown on said last mentioned map;

68. Thence easterly in a direct line to a point on the easterly line of the Official Bed of the Los Angeles River as shown on map of Tract No. 12316, recorded in Book 263, page 5, of Maps, in the office of said Recorder, said point being at the westerly terminus of that certain course of the center line of Olympic Boulevard shown on said last mentioned map as having a bearing of North  $89^{\circ} 21'$  West and a distance of 214.13 feet;

69. Thence easterly along said center line of Olympic Boulevard and continuing easterly along the center line of Olympic Boulevard as shown on said map of Tract No. 12316 to the intersection with the center line of that portion of Rio Vista Avenue, 60 feet wide, extending northerly from said Olympic Boulevard, as shown on said map of Tract No. 12316, said intersection being also shown on map of Tract No. 6783 recorded in Book 99, page 77, of Maps, in the office of said Recorder, as the intersection of Olympic Boulevard, formerly Ninth Street, 100 feet wide, with said center line of Rio Vista Avenue;

70. Thence southeasterly along said center line of Olympic Boulevard, formerly Ninth Street, 100 feet wide, and continuing southeasterly along said center line to the intersection with the center line of Mines Avenue, as shown on said map of Tract No. 6783;

71. Thence easterly along said center line of Olympic Boulevard to the intersection with the center line of Lorena Street, 82.50 feet wide, as shown on said map of Tract No. 6783;

72. Thence easterly in a direct line to the most westerly corner of Lot 636 of Tract No. 941, as shown on map recorded in Book 16, pages 194 and 195, of Maps, in the office of said Recorder, said most westerly corner being a point on the southerly boundary line of said Tract No. 941;

73. Thence easterly along said southerly boundary line of Tract No. 941 to the most easterly corner of Lot 480 of said Tract No. 941;

74. Thence easterly in a direct line to the intersection of the north-easterly line of Hollenbeck Avenue, 82.50 feet wide, as shown on said map of Tract No. 941, with the southerly boundary line of said Tract No. 941;

75. Thence easterly along said last mentioned southerly boundary line of Tract No. 941 to the boundary line of the City of Los Angeles;

76. Thence northerly and easterly along the boundary line of the City of Los Angeles to an angle point in the boundary line, said point also being a point in the boundary of the City of Monterey Park, at the northwest corner of Section 29, Township 1 South, Range 12 West, S.B.B. & M.;

77. Thence southerly along the boundary line of said City of Monterey Park and continuing along the boundary line of said City of Monterey Park, following all its various courses and curves, to its first intersection with the boundary line of the City of Montebello, said intersection being in Pomona Boulevard (formerly Third Street) between Gerhart Avenue and Bradshaw Avenue, at the north quarter section corner of fractional Section 4, Township 2 South, Range 12 West, S.B.B. & M., as shown on map of the Repetto Rancho recorded in Book 759, pages 21 and 22, of Deeds, in the Office of the Recorder of the County of Los Angeles;

78. Thence easterly along the common boundary line of said City of Monterey Park and said City of Montebello to the easterly terminus of said common boundary line, said easterly terminus being at the intersection of said common boundary line with the southwesterly line of Rancho La Merced, as shown on map recorded in Book 13, page 24, of Patents, in the office of said Recorder, and being in the south line of Township 1 South, Range 12 West, S.B.B. & M.;

79. Thence easterly along the boundary line of said City of Monterey Park and said south line of Township 1 South, Range 12 West, S.B.B. & M., to an angle point in said boundary line of the City of Monterey Park;

80. Thence easterly along said south line of Township 1 South, Range 12 West, S.B.E. & M., to the easterly line of Tract No. 10063 as shown on map recorded in Book 179, pages 32 to 34, inclusive, of Maps, in the office of said Recorder;

81. Thence southerly along said easterly line of Tract No. 10063 to its first intersection with the boundary line of said City of Montebello;

82. Thence easterly along the boundary line of said City of Montebello and continuing along the boundary line of said City of Montebello, following all its various courses and curves, to its intersection with the Compromised Dividing Line between the Rancho Paso de Bartolo on the South Side and the Ranchos La Puente, Potrero de Felipe Lugo and La Merced on the North Side, as shown on map filed in Book 1, page 73, Record of Surveys, in the office of said Recorder;

83. Thence easterly along said Compromised Dividing Line to a point thereon, distant 1068.62 feet westerly, measured along said Compromised Dividing Line, from the center line of Gate Road (now Durfee Avenue), 40 feet wide, as described in deed to the County of Los Angeles, recorded in Book 1207, page 74, of Deeds, in the office of said Recorder;

84. Thence easterly in a direct line to the point of intersection of said center line of Gate Road (now Durfee Avenue), with a line bearing South  $86^{\circ} 40' 44''$  West from a point in the northwesterly line of Lot 12, Tract No. 688, as shown on map recorded in Book 15, page 171, of Maps; in the office of said Recorder, said last mentioned point being distant North  $24^{\circ} 55' 13''$  East 556.72 feet, measured along said northwesterly line of Lot 12, from the southwesterly corner of said Lot 12;

85. Thence North  $86^{\circ} 40' 44''$  East 2759.06 feet, more or less, to the northwesterly prolongation of the northeasterly line of Parcel 1 of land described in deed to Walter G. Kruse, et ux., recorded in Book 25982, page 70, of Official Records, in the office of said Recorder;

86. Thence easterly in a direct line to an angle point in the southerly line of Lot 11, of aforementioned Tract No. 688, from which angle point the most westerly corner of said Lot 11 is shown on said map of Tract No. 688 to be distant 453.30 feet S.  $68^{\circ} 51' 1/2''$  W., measured along said southerly line of Lot 11;

87. Thence southerly in a direct line to an angle point in the northwesterly line of Lot 1, Cohn's Partition of Lots 26, 27, 29 and 32 as shown on map recorded in Book 60, pages 3 and 4, of Miscellaneous Records, in the office of said Recorder, said last mentioned angle point being shown on said map of Cohn's Partition of Lots 26, 27, 29 and 32 to be located as follows:

Beginning at the most westerly corner of said Lot 1; thence, N.  $49^{\circ}$   $52'$  E. 9.00 chains; thence N.  $23^{\circ}$   $13'$  E. 5.09 chains to said last mentioned angle point;

88. Thence southwesterly along said northwesterly line of Lot 1 to said most westerly corner of Lot 1, said most westerly corner also being the most northerly corner of Lot 2 of said Cohn's Partition of Lots 26, 27, 29 and 32;

89. Thence southwesterly along the northwesterly line of said Lot 2 and continuing along the line of said Lot 2, following all its various courses, to the most westerly corner of Lot 7, of said Cohn's Partition of Lots 26, 27, 29 and 32;

90. Thence southerly along the westerly line of said Lot 7 and continuing along the southerly prolongation of said westerly line of Lot 7 to the easterly prolongation of the center line of Guirado Street, 40 feet wide, (now Pioneer Boulevard) as shown on map of Tract No. 3584, recorded in Book 38, page 70, of Maps, in the office of said Recorder;

91. Thence along said easterly prolongation of the center line of Guirado Street, 40 feet wide, (now Pioneer Boulevard), to the center line of Workman Mill Road as described in deed to the County of Los Angeles recorded in Book 12367, page 75, of Official Records, in the office of said Recorder;

92. Thence southerly along said center line of Workman Mill Road, following all its various courses and curves, to the northerly terminus of that certain course having a bearing of N.  $6^{\circ}$   $10'$   $15''$  E. in the center line of Workman Mill Road, as shown on map of Tract No. 6041 recorded in Book 180, pages 12 to 14, inclusive, of Maps, in the office of said Recorder;

93. Thence southerly along the center line of Workman Mill Road as shown on said map of Tract No. 6041 and as shown on map of Tract No. 14971, recorded in Book 341, pages 5 to 10 inclusive, of Maps, in the office of said Recorder, to the westerly prolongation of the northerly line of Lot 3, shown on said map of Tract No. 14971 as having a bearing and length of S.  $83^{\circ}$   $49'$   $45''$  E., 221.86 feet, said northerly line of Lot 3 also being in the northerly boundary line of said Tract 14971;

94. Thence easterly along said westerly prolongation, said northerly line of Lot 3 and said northerly boundary line of Tract No. 14971 and continuing along the boundary line of said Tract No. 14971, following all its various courses, to the westerly line of Lot 24, of Cohn's Partition of Lot 31, as shown on map recorded in Book 60, page 6, of Miscellaneous Records, in the office of said Recorder;

95. Thence northerly along said westerly line of Lot 24 to the westerly prolongation of the north line of Section 16, Township 2 South, Range 11 West, S.B.B. U M.;

96. Thence easterly along said westerly prolongation and along the north line of said Section 16, to the northeast corner of said Section 16;

97. Thence southerly in a direct line to the northeasterly corner of the City of Whittier, said northeasterly corner being also the northeasterly corner of that certain annexation to said City of Whittier designated Annexation of 1907;

98. Thence southerly along the boundary line of said City of Whittier to its intersection with the north line, or its westerly prolongation, of Section 22, said last mentioned Township and Range;

99. Thence easterly along said north line of Section 22; or along said westerly prolongation and said north line of Section 22, to the northeast corner of said Section 22;

100. Thence southerly along the east line of said Section 22 to the west quarter corner of Section 23, said last mentioned Township and Range;

101. Thence easterly along the east and west quarter section lines of said Section 23 to the east quarter corner of said Section 23;

102. Thence southerly along the east line of said Section 23 to the northwest corner of Section 25, said last mentioned Township and Range;

103. Thence easterly along the north line of said Section 25 to the westerly line of Tract No. 2390 as shown on map recorded in Book 23, page 29, of Maps, in the office of said Recorder;

104. Thence northerly along said westerly line of Tract No. 2390, to the northwesterly corner of said Tract;

105. Thence easterly along the northerly line of said Tract No. 2390 to the northeasterly corner of said Tract;

106. Thence southerly along the easterly line of said Tract No. 2390 to the southeasterly corner of said Tract, said corner also being in northerly line of Lot 3 of the New England Oil Company Tract, as shown on map recorded in Book 17, page 131, of Maps, in the office of said Recorder;

107. Thence easterly and southerly along the northerly and easterly lines of said Lot 3 to the southeasterly corner of said Lot 3, said corner also being in the southerly line of said New England Oil Company Tract;

108. Thence easterly and northerly along the southerly and easterly lines of said New England Oil Company Tract to the northeasterly corner of Lot 13 of said last mentioned Tract, said northeasterly corner also being in the southerly line of Lot 5, Tract No. 4380, as shown on map recorded in Book 48, pages 46 and 47, of Maps, in the office of said Recorder;

109. Thence easterly along said southerly line of Lot 5 to the southeasterly corner of said Lot 5;

110. Thence easterly in a direct line to the southwesterly corner of Lot 2, Tract No. 3422, as shown on map recorded in Book 37, page 51, of Maps, in the office of said Recorder;

111. Thence easterly along the southerly line of said Lot 2, to the easterly line of Rancho La Habra, as shown on map recorded in Book 1, pages 275 and 276, of Patents, in the office of said Recorder;

112. Thence southerly along said easterly line of Rancho La Habra to its intersection with the southerly boundary line of the County of Los Angeles;

113. Thence westerly along said southerly boundary line of the County of Los Angeles and continuing along the boundary line of said County of Los Angeles, following all its various courses and curves to the point of beginning.

The boundary line of the County of Los Angeles and the boundary line of the City of Los Angeles referred to herein, except where otherwise expressly designated, are such boundary lines as the same existed at 12:00 noon on October 31, 1958.

APPENDIX 2

CURRENT VERSION OF WATER RIGHT HOLDERS

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### Central Basin Water rights Holders

Party ID	Party	Allowed Pumping Allocation (APA)
0020	A B C Unified School District	298.00
0107	American Textile Maintenance Company	65.00
0125	Angeles Abbey Memorial Park, Inc	4.00
0127	Aqua Capital Management LP	3,760.00
0120	Arco Metals Co, American Brass	0.00
0150	Artesia Cemetery District	12.00
0160	Artesia, City of	24.00
0210	Atkinson Brick Company	9.00
0220	Atlantic Richfield Company	0.00
0229	Automobile Club of Southern California	6.00
0265	Baker Commodities, Inc	60.00
0387	Bell Gardens, City of	1,914.00
0420	Bellflower Home Garden Water Company	306.00
0430	Bellflower Unified School District	89.00
0410	Bellflower, City of	1,380.00
0445	Bellflower-Somerset Mutual Water Company	4,312.88
0642	Boy Scouts of America, Long Beach Area	1.00
0657	Buell, Mary Dolores	1.00
0679	California-American Water Company	2,067.00
0681	California Domestic Water Company	87.00
0686	California, State of	50.00
0740	California Water Service Company	11,774.00
0742	California Water Service Company (Dominguez)	6,480.00
0795	Central Basin Municipal Water District	50.65
0826	Cerritos, City of	4,680.03
0830	Cerritos Community College District	147.00
0855	Chang, I-Hsin and Associates	1.00
0885	Chevron U S A, Inc	94.00
0970	Coast Packing Company	530.00
1017	Commerce, City of	5,081.00
1020	Compton, City of	5,780.00
1030	Compton Unified School District	38.00
1115	Corning Trust	3.75
1165	Crandell, F.J.	1.00
1236	Darling-Delaware Company, Inc	117.00
1385	Dolan, J.E., P.A., & T.P.	2.00

### Central Basin Water rights Holders

Party ID	Party	Allowed Pumping Allocation (APA)
1450	Downey, City of	16,553.62
1550	El Rancho Unified School District	55.00
1560	Emoto, John H	2.00
1572	Equilon Enterprises, LLC	6.00
1597	Exide Technologies	62.00
1606	Farmers & Merchants Trust Co of Long Beach	14.00
1700	Flesch, Elizabeth, et al	14.00
1719	Footbridge 1 Trust	3.75
1720	Ford Motor Company	4.50
1726	Frampton, Harvey	10.00
1735	Frampton, William H	25.00
1843	Golden State Water Company	16,439.20
1960	Gordon, Robert E	4.00
1988	Graham, Hugh W or Marcia K, Trustees	6.00
2155	Harada Brothers	6.00
2209	Hathaway, Jesse R	4.07
2211	Hathaway, Merrie F	1.86
2212	Hathaway, Richard F, Jr.	4.07
2213	Hathaway, William A	4.07
2214	Hathaway, Lolene	4.08
2378	Huntington Park, City of	3,853.00
2440	Inglewood Park Cemetery	317.00
2493	Jones Company, The	0.00
2710	Kotake, Masao	27.97
2749	La Habra Heights County Water District	2,596.00
2770	Lakewood, City of	9,432.00
2884	Lincoln Memorial Park, Inc	34.00
2890	Little Lake Cemetery District	14.00
2910	Long Beach, City of	32,692.00
2920	Los Angeles, City of	15,000.00
2930	Los Angeles County Rancho Los Amigos	490.00
3010	Lunday-Thagard Oil Company	212.00
3040	Lussman, Paul H, Jr., et al	7.00
3060	Lynwood, City of	5,337.00
3080	Lynwood Park Mutual Water Company	222.00
3140	Martin, Mary	28.00

### Central Basin Water rights Holders

Party ID	Party	Allowed Pumping Allocation (APA)
3170	Maywood Mutual Water Company No 1	741.00
3180	Maywood Mutual Water Company No 2	912.00
3190	Maywood Mutual Water Company No 3	1,407.00
3210	Mellano, G, et al	13.00
3301	Mitsuuchi, Mary F Trust	11.00
3351	Montebello, City of	386.50
3360	Montebello Land and Water Company	1,694.00
3501	Nancy Dee Keane Living Trust	4.00
3514	New England Mutual Life Insurance Company	2.00
3517	Newark Group, Inc., The	257.00
3545	Northrop Grumman Systems Corporation	4.50
3550	Norwalk, City of	2,273.00
3560	Norwalk-La Mirada Unified School District	378.00
3578	O N K Farms	8.00
3605	Oltmans Construction Company	3.00
3640	Orchard Dale Water District	1,254.00
3705	PABCO Building Products, LLC	500.00
3745	Paradise Memorial Park	16.00
3755	Paramount, City of	5,883.00
3760	Paramount Unified School District	46.00
3780	Park Water Company	2.30
3787	Patrician Associates Inc/Majestic Realty Company	12.00
3828	Petersburg, L.P.	300.00
3847	Pico Boys Baseball, Inc	13.00
3853	Pico Rivera, City of	5,579.00
3850	Pico Water District	3,624.00
3958	Puente Basin Water Agency	365.00
3994	Randall, Villis Family Trust	4.00
4108	Rippy, Francine	4.07
4115	Rockview Dairies, Inc	101.00
4116	Rocky Mountain Industries, Inc	0.00
4150	Roman Catholic Archbishop of Los Angeles	347.00
4160	Rosales, Elvira C	3.00
4165	Rosing, L S Trust and P Schwartz	6.00
4175	Rowland Water District	1.00
4300	St John Bosco School	42.00

### Central Basin Water rights Holders

Party ID	Party	Allowed Pumping Allocation (APA)
4330	San Gabriel Valley Water Company	2,565.35
4335	Santa Fe Springs, City of	4,035.78
4345	Sativa - Los Angeles County Water District	474.00
4349	Scantlebury, Robert P	4.00
4378	September Properties, LLC	22.00
4450	Signal Hill, City of	2,022.00
4473	Simmons Survivor's Trust	33.00
4590	South Gate, City of	11,183.00
4540	South Montebello Irrigation District	1,268.00
4549	Southern California Edison Company	670.00
4685	Statewide Stations, Inc	1.00
4810	Suburban Water Systems	3,721.00
4915	Taurek, Mary	1.00
4934	Tesoro Logistics Operations	54.00
4980	Tract Number One Hundred and Eighty Water Co	2,137.00
4990	Tract 349 Mutual Water Company	423.00
5019	Tucker, W and/or Bobby Robertson	8.00
5358	Vangrootheest, Ernest A	10.00
5460	Vernon, City of	7,539.00
5490	Virginia Country Club	274.00
5610	Walnut Park Mutual Water Company	996.00
5528	WEMS, Inc.	8.00
5660	Whittier, City of	895.00
5670	Whittier Union High School District	100.00
5750	Wolfsberger, Helen and Christine Joseph	2.00
5800	Yamamoto, George and Alice	14.00
5903	Zane Living Trust	0.00
<b>Central Basin Total</b>		<b>217,367.00</b>

Appendix 3

CENTRAL BASIN SMALL WATER PRODUCERS GROUP

As used in the Central Basin Judgment, the “Small Water Producers Group” shall refer to a voluntary group consisting of parties to the Central Basin Judgment with an Annual Pumping Allocation no greater than 5,000 acre-feet, acting jointly to represent its members with regards to interests specific to them and their constituents and/or customers concerning the management of the Central Basin and the administration and enforcement of this Judgment. Membership in the Small Water Producers Group may be modified from time to time by affirmative vote of the then-current composition of said Group, provided that each member thereof shall hold no greater than 5,000 acre-feet of Allowed Pumping Allocation.

Any benefit or right attributed to the Group by the Judgment, including the reserved seat on the Water Rights Panel, shall be valid and enforceable, so long as the Group’s membership consists of a minimum of 5 parties to the Central Basin Judgment who are Water Purveyors., .

As of the time of entry of this Third Amended Judgment, the Small Water Producers Group consists of:

Bellflower-Somerset Mutual Water Company

La Habra Heights County Water District

Montebello Land and Water Company

City of Norwalk

Orchard Dale Water District

Pico Water District

Sativa -- Los Angeles County Water District

South Montebello Irrigation District

Appendix 4

PERMITTED EXISTING EXPORTS

The Agreement among Rowland Water District, on the one hand, and La Habra Heights County Water District and Orchard Dale Water District, on the other hand, allowing for maximum production of 2,500 acre-feet per year.

The Agreement between Puente Basin Water Agency and California Domestic Water Company, allowing for maximum production of 2,500 acre-feet per year.

1 PROOF OF SERVICE

2  
3 STATE OF CALIFORNIA, COUNTY OF LOS ANGELES

4 I am employed in the county of LOS ANGELES, State of California. I am over the age of 18 and not a party to the within  
action; my business address is: 301 North Lake Avenue, 10th Floor, Pasadena, California 91101

5 On DECEMBER 27, 2013, I served the foregoing document described as **THIRD AMENDED JUDGMENT** on  
6 **INTERESTED PARTIES** in this action

- 7 ☒ by placing the true copies thereof enclosed in sealed envelopes addressed as stated on the attached mailing list:  
8 ☐ by placing ☐ the original ☐ a true copy thereof enclosed in sealed envelopes addressed as follows:

9 SEE ATTACHED MAILING LIST

10  
11  
12 ☒ BY MAIL

13 ☐ I deposited such envelope in the mail at PASADENA, California.  
14 The envelope was mailed with postage thereon fully prepaid.

15 ☒ I caused such envelope to be deposited in the mail at PASADENA, California.  
The envelope was mailed with postage thereon fully prepaid.

16 I am "readily familiar" with firm's practice of collection and processing correspondence for mailing. It is deposited with U.S.  
17 postal service on that same day in the ordinary course of business. I am aware that on motion of party served, service is  
presumed invalid if postal cancellation date or postage meter date is more than 1 day after date of deposit for mailing in  
affidavit.

18 Executed on DECEMBER 27, 2013, at PASADENA, California.

19 ☐ \*\* (BY PERSONAL SERVICE) I delivered such envelope by hand to the offices of the addressee.  
20 Executed on \_\_\_\_\_ at \_\_\_\_\_, California.

21 ☒ (State) I declare under penalty of perjury under the laws of the State of California that the above is true and correct.

22  
23 ☐ (Federal) I declare that I am employed in the office of a member of the bar of this court at whose direction the service was  
24 made.

25 PAMELA J. CHILDRESS  
26 (NAME)

27  
28  
PROOF OF SERVICE

## CENTRAL BASIN SERVICE LIST - CASE NO. C 786 656

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## CENTRAL BASIN SERVICE LIST - CASE NO. C 786 656

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## **Appendix M: Unincorporated Los Angeles County Community Climate Action Plan**

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**City of Huntington Park 2020 Urban Water Management Plan**

**Final**

# **UNINCORPORATED LOS ANGELES COUNTY COMMUNITY CLIMATE ACTION PLAN 2020**

**August 2015**



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# Contents

	Page
<b>List of Tables and Figures .....</b>	<b>iii</b>
	Page
<b>Executive Summary.....</b>	<b>ES-1</b>
ES.1    Introduction.....	ES-1
ES.2    Greenhouse Gas Emissions in the Unincorporated County .....	ES-1
ES.3    CCAP Actions to Reduce Greenhouse Gas Emissions.....	ES-2
<b>Chapter 1 Introduction.....</b>	<b>1-1</b>
1.1    Purpose of the Community Climate Action Plan .....	1-1
1.2    How to Use the CCAP .....	1-1
1.3    Prior County Efforts on Climate Change and Relationship to Other County Plans .....	1-3
1.3.1    General Plan .....	1-3
1.3.2    Municipal Climate Action Plan.....	1-3
1.4    Background Information on Climate Change Science .....	1-4
1.5    Local Climate Change Effects and Public Health .....	1-6
1.5.1    Local Climate Change Effects.....	1-6
1.5.2    Climate Change and Public Health .....	1-8
1.6    Climate Change Regulations and Initiatives .....	1-9
1.7    Climate Change Adaptation.....	1-10
<b>Chapter 2 Emissions Inventory and Forecast .....</b>	<b>2-1</b>
2.1    Introduction.....	2-1
2.2    Overview of Analysis .....	2-1
2.3    Community Emissions Inventory for 2010 .....	2-2
2.4    Community Emissions Forecast for 2020 .....	2-3
<b>Chapter 3 GHG Emissions Reduction Target for 2020.....</b>	<b>3-1</b>
3.1    Introduction.....	3-1
3.2    Emissions Reduction Target .....	3-1
3.3    Meeting the Emissions Reduction Target.....	3-3
<b>Chapter 4 Actions to Reduce Greenhouse Gas Emissions .....</b>	<b>4-1</b>
4.1    Introduction.....	4-1
4.2    The CCAP Framework .....	4-1
4.2.1    CCAP Actions.....	4-1
4.2.2    Community Co-Benefits.....	4-2
4.3    Strategy Areas to Reduce Greenhouse Gases .....	4-3
4.4    Summary of Emissions Reductions and Cost Effectiveness by Action .....	4-9
4.5    Statewide GHG Reduction Measures .....	4-19

<b>Chapter 5 Implementation Program .....</b>	<b>5-1</b>
5.1 Introduction.....	5-1
5.2 CCAP Implementation Team .....	5-1
5.3 Implementation of CCAP Actions .....	5-1
5.4 CCAP Implementation Schedule.....	5-7
5.5 CCAP Funding .....	5-7
5.5.1 CCAP Funding at the Plan Level .....	5-7
5.5.2 Project Level Incentive Examples .....	5-12
5.6 Evaluation and Monitoring.....	5-13
5.7 CCAP Updates and Plan Evolution.....	5-14
<b>Chapter 6 References .....</b>	<b>6-1</b>

## APPENDICES

<b>Appendix A</b>	Relevant Greenhouse Gas Legislation and Regulations
<b>Appendix B</b>	Inventory and Forecast Details
<b>Appendix C</b>	Reduction Measure Detail
<b>Appendix D</b>	Reduction Measure Comparison to General Plan Policies
<b>Appendix E</b>	Acronyms and Abbreviations

## Tables and Figures

Table		Page
1-1	Climate Change Effects and Potential Public Health Impacts.....	1-9
2-1	2010 GHG Inventory for Unincorporated LA County by Sector.....	2-2
2-2	Summary of the 2020 GHG Forecast for Unincorporated LA County and Comparison to the 2010 Inventory.....	2-4
3-1	California Emissions and Reductions to 1990.....	3-2
3-2	Los Angeles County Back-Cast Emissions and Reductions to Be Consistent with AB 32.....	3-3
3-3	Summary of State and Local GHG Reductions.....	3-3
4-1	Summary of Local Actions and Associated 2020 GHG Emissions Reductions .....	4-10
4-2	Summary of Costs, Savings, and Benefits Associated with Local GHG Reduction Actions.....	4-14
4-3	Summary of Statewide Actions and Associated 2020 GHG Emissions Reductions .....	4-20
5-1	CCAP Implementation Steps.....	5-3
5-2	Preliminary CCAP Implementation Schedule.....	5-7
5-3	CCAP Total Upfront Costs and Annual Savings/Costs by Strategy Area .....	5-9
Figure		Page
ES-1	2010 GHG Inventory for Unincorporated LA County by Sector.....	ES-2
1-1	Project Streamlining: Benefits of a Climate Action Plan.....	1-2
1-2	MCAP and CCAP Emissions Overlap.....	1-4
1-3	The Greenhouse Effect .....	1-5
2-1	2010 GHG Inventory for Unincorporated LA County by Sector.....	2-3
2-2	2020 GHG Forecast for Unincorporated LA County by Sector.....	2-4
3-1	Summary of State and Local GHG Reductions.....	3-4

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An aerial photograph of a suburban neighborhood. In the foreground, a large concrete aqueduct filled with blue water runs horizontally across the frame. Behind the aqueduct, several large, modern houses with light-colored stucco and tiled roofs are visible. The houses are surrounded by green trees and shrubs. In the background, a dry, hilly landscape with sparse vegetation stretches towards the horizon under a clear sky.

# Executive Summary

*"Our lives are connected to the climate. Human societies have adapted to the relatively stable climate we have enjoyed since the last ice age, which ended several thousand years ago. A warming climate will bring changes that can affect our water supplies, agriculture, power and transportation systems, the natural environment, and even our own health and safety."*

—U.S. Environmental Protection Agency



## ES.1 Introduction

The County of Los Angeles (County) acknowledges the consensus among leading scientists that without action to reduce greenhouse gas (GHG) emissions, climate change due to global warming will pose a considerable threat to the environment and to human health and society.

To reduce the impacts of climate change, the County has set a target to reduce GHG emissions from community activities in the unincorporated areas of Los Angeles County by at least 11% below 2010 levels by 2020. This Community Climate Action Plan (CCAP) describes the County's plan for achieving this goal, including specific strategy areas for each of the major emissions sectors, and provides details on the 2010 and projected 2020 emissions in the unincorporated areas. The CCAP is a component of the Los Angeles County General Plan.

Implementing State measures and the local measures in the CCAP would avoid the generation of more than 1.9 million metric tons of carbon dioxide equivalent (MT CO<sub>2</sub>e), which is equivalent to the following actions in 2020 (U.S. Environmental Protection Agency 2014):

- Removing more than 411,000 passenger vehicles from the road.
- Reducing gasoline consumption by more than 220 million gallons.
- Providing renewable energy to power over 178,000 homes.

The actions in the CCAP are priority actions and intended for near-term implementation, such that the County can achieve its GHG reduction goal for 2020 for the unincorporated areas of Los Angeles County.

## ES.2 Greenhouse Gas Emissions in the Unincorporated County

Estimated GHG emissions generated by community activities in the unincorporated areas in 2010 were approximately 7.9 million MT CO<sub>2</sub>e (Figure ES-1). This is equivalent to the annual GHG emissions generated by approximately 1.6 million passenger vehicles and represents per capita emissions of 7.5 MT CO<sub>2</sub>e for each of the unincorporated areas' 1 million residents. Of these total emissions, as shown in Figure ES-1, building energy use is the largest source of emissions (49%). Transportation emissions from on- and off-road vehicles are the second largest source of emissions (42%). The third largest source is community waste generation (7%). The remaining sources are water conveyance and wastewater generation (2%), agriculture (0.4%), and stationary sources (0.02%).

The CCAP is composed of State and local actions to reduce GHG emissions within the unincorporated areas. The State actions considered in the CCAP include: the Renewables Portfolio Standard, Title 24 Standards for Commercial and Residential Buildings (Energy Efficiency and CALGREEN), Pavley/Advanced Clean Cars (Vehicle Efficiency), the Low Carbon Fuel Standard, and the California cap-and-trade program. These State actions generally do not require action from the County, but will result in local GHG reductions in the unincorporated areas.

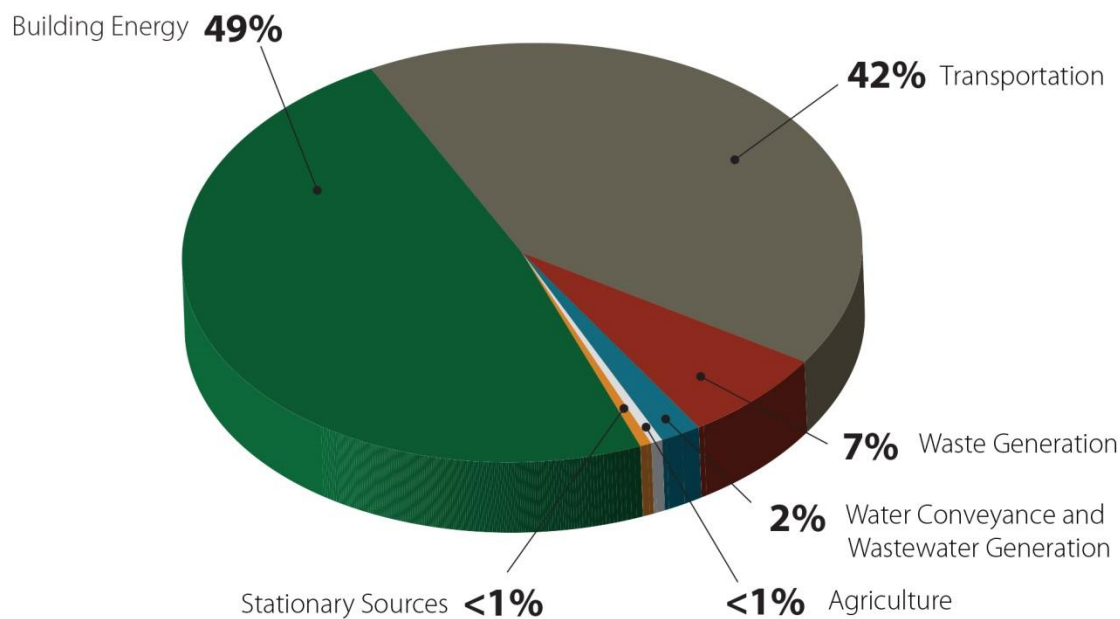


Figure ES-1. 2010 GHG Inventory for Unincorporated LA County by Sector

## ES.3 CCAP Actions to Reduce Greenhouse Gas Emissions

There are 26 local actions included in the CCAP. The local actions are grouped into five strategy areas: green building and energy; land use and transportation; water conservation and wastewater; waste reduction, reuse, and recycling; and land conservation and tree planting. Many of the local actions are cost effective, particularly in the green building and energy strategy area, with several energy efficiency investments that can recoup initial costs in one to five years. In addition to reducing GHG emissions, all local actions have many co-benefits, such as improved public health.

The following summaries for each strategy area include information on existing and continuing initiatives, estimated GHG reductions and costs/savings (as available), potential community co-benefits, and the relevant CCAP actions.

## Green Building and Energy

### CO-BENEFITS:



### Existing Initiatives:

The County has developed a number of energy efficiency and renewable energy programs, including the following. Continued implementation of these programs will support actions identified in the CCAP.

» **Energy Upgrade California**

Provides rebates and incentives for efficiency projects.

» **Los Angeles County Code (Title 31)**

Identifies sustainable policies for new building design.

» **Commercial Building Performance Partnership**

Provides innovative financing mechanisms to fund energy efficiency upgrades.

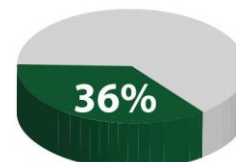
» **Renewable Energy and Clean Fuels Program**

Implements projects to accelerate use of compressed natural gas as an alternative fuel.

2020 Emissions Reduction

**139,968**  
(MT CO<sub>2</sub>e)

Percent of Local  
Emissions Reduction\*



Up to  
**\$55 Million**  
In Cost Savings

\* Reductions achieved by State programs are not included in the percentage.

### New Actions:

New actions identified in the CCAP will achieve additional GHG reductions by 2020 by expanding green building initiatives and popular efficiency programs. Actions identified in the CCAP include the following:

- » **BE-1: Green Building Development.** Encourages energy reductions in new development.
- » **BE-2: Energy Efficiency Programs.** Sets goals for energy efficiency retrofits for existing development.
- » **BE-3: Solar Installations.** Encourages solar installations for new and existing buildings.
- » **BE-4: Alternative Renewable Energy Programs.** Promotes alternative renewable energies.
- » **BE-5: Wastewater Treatment Plant Biogas.** Encourages renewable biogas projects.
- » **BE-6: Energy Efficiency Retrofits of Wastewater Equipment.** Promotes efficient treatment equipment.
- » **BE-7: Landfill Biogas.** Encourages renewable biogas projects at regional landfills.

## Land Use and Transportation

### CO-BENEFITS:



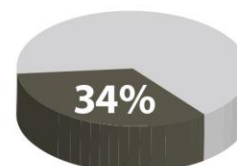
### Existing Initiatives:

Like most California communities, a significant portion of the County's emissions are from on-road transportation sources. Developing realistic ways to reduce vehicle trips and vehicle miles traveled has therefore been a priority. The following are key transportation initiatives already undertaken by the County. Continued implementation of these programs will support actions identified in the CCAP.

- » **Healthy Design Ordinance**  
Promote physical activity, walkability, and access.
- » **Bicycle Master Plan**  
Promotes bicycle ridership and bike-friendly design throughout the County.
- » **Sustainable Transportation Programs**  
Includes programs to increase the efficiency of the transportation network.

2020 Emissions Reduction  
**129,064**  
(MT CO<sub>2</sub>e)

Percent of Local  
Emissions Reduction\*



\* Reductions achieved by State programs are not included in the percentage.

Note: Cost savings not available.

### New Actions:

New actions identified in the CCAP will achieve additional GHG reductions by 2020 with land use changes, network improvements, new pedestrian and bicycle infrastructure, and many other actions. Actions identified in the CCAP include the following:

- » **LUT-1: Bicycle Programs and Supporting Facilities.** Expands and improves facilities for cyclists.
- » **LUT-2: Pedestrian Network.** Improves pedestrian infrastructure to promote walking and access to transit.
- » **LUT-3: Transit Expansion.** Creates bus priority lanes and improves transit facilities and amenities.
- » **LUT-4: Travel Demand Management.** Encourages employer-sponsored programs to reduce vehicle use.
- » **LUT-5: Car-Sharing Program.** Provides on-demand access to a shared vehicle fleet.
- » **LUT-6: Land Use Design and Density.** Promotes sustainability in land use design.
- » **LUT-7: Transportation Signal Synchronization Program.** Enhances traffic signal synchronization.
- » **LUT-8: Electric Vehicle Infrastructure.** Promotes electric vehicle infrastructure.
- » **LUT-9: Idling Reduction Goal.** Limits idling time for heavy-duty construction equipment.
- » **LUT-10: Efficient Goods Movement.** Maximizes the efficiency of goods movement.
- » **LUT-11: Sustainable Pavements Program.** Improves the efficiency of pavement rehabilitation.
- » **LUT-12: Electrify Construction and Landscaping Equipment.** Establishes electrification goals for equipment.

## Water Conservation and Wastewater

### CO-BENEFITS:



### Existing Initiatives:

The County has developed conservation rebates, smart gardening workshops, and storm water control. The following is a sample of some of the water-saving rebates currently offered by the County.

- » **\$100 for high efficiency clothes washers**
- » **\$4 for rotary sprinkler nozzles**
- » **\$235 for weather-based sprinkler controllers**
- » **\$1 per square foot water-efficient landscaping**

Existing programs like those described above have consistently reduced annual per capita water consumption in unincorporated LA County. Continued implementation of these programs will support actions identified in the CCAP.

### New Actions:

New actions identified in the CCAP will achieve additional GHG reductions by 2020 through water conservation and use of recycled water. Reduced water consumption will likewise contribute to reductions in building energy use. For example, efficient faucets that use less water will require less electricity and natural gas for hot water heating. Reducing water demand will therefore conserve water and save energy. Actions identified in the CCAP include the following:

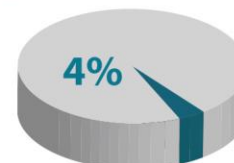
- » **WAW-1: Per Capita Water Use Reduction Goal**  
Reduces per capita water consumption; goals range from 5-20% below baseline values.
- » **WAW-2: Recycled Water, Water Supply Improvement Programs, and Stormwater Runoff**  
Encourages use of recycled and grey water.

2020 Emissions Reduction

**101,675**  
(MT CO<sub>2</sub>e/Year)

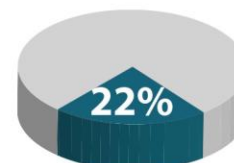
### Water Sector Reductions: 15,303 MT CO<sub>2</sub>e/Year

Percent of Local  
Emissions Reduction\*



### Building Energy Sector Reductions: 86,371 MT CO<sub>2</sub>e/Year

Percent of Local  
Emissions Reduction\*



\* Reductions achieved by State programs are not included in the percentage.

Note: Cost savings not quantified.

## Waste Reduction, Reuse and Recycling

CO-BENEFITS:



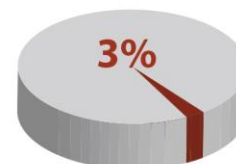
### Existing Initiatives:

The County has developed and implemented a number of recycling programs for community waste and construction and demolition waste. These programs collectively divert more than 50% of waste generated in the County to recycling centers and other end uses. Continued implementation of these programs will support actions identified in the CCAP.

2020 Emissions Reduction

12,212  
(MT CO<sub>2</sub>e)

Percent of Local  
Emissions Reduction\*



\* Reductions achieved by State programs are not included in the percentage.

### New Actions:

The following new action identified in the CCAP will achieve additional GHG reductions by 2020 by setting a waste diversion goal for the unincorporated County of at least 75%.

» **SW-1: Waste Diversion Goal.** Reduces landfilled waste by diverting at least 75% of waste.

## Land Conservation and Tree Planting

CO-BENEFITS:



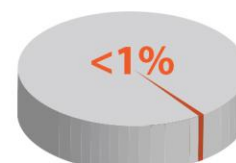
### Existing Initiatives:

The County has developed an urban forestry plan and an oak woodlands conservation management plan. *The Oak Woodlands Conservation Management Plan* includes policies to address the loss and creation of oak woodlands in LA County. Continued implementation of these programs will support actions identified in the CCAP.

2020 Emissions Reduction

1,126  
(MT CO<sub>2</sub>e)

Percent of Local  
Emissions Reduction\*



\* Reductions achieved by State programs are not included in the percentage.

### New Actions:

New actions identified in the CCAP will achieve additional GHG reductions through carbon sequestration by 2020 by both conserving existing and creating new natural spaces. The following actions are identified in the CCAP.

- » **LC-1: Develop Urban Forests.** Supports and expands urban forest programs.
- » **LC-2: Create New Vegetated Open Space.** Promotes land restoration and re-vegetation.
- » **LC-3: Promote the Sale of Locally Grown Foods and/or Products.** Supports locally grown food.
- » **LC-4: Protect Conservation Areas.** Encourages protection of current natural areas.



## Chapter 1 Introduction

---

“Southern California’s climate is changing and will continue to change over the next several decades, along with other regions of the earth. These changes are the results of the growing accumulation of greenhouse gases in the atmosphere.”

—Southern California Association of Governments



## 1.1 Purpose of the Community Climate Action Plan

The County of Los Angeles (County) has developed the Community Climate Action Plan (CCAP) to reduce and avoid greenhouse gas (GHG) emissions associated with community activities in the unincorporated areas of Los Angeles County. The CCAP demonstrates the County's leadership and role in contributing to statewide GHG emission reductions. The CCAP addresses emissions from community activities in the following sectors: building energy, transportation, water conveyance and wastewater processing, and waste generation. The CCAP also establishes a GHG reduction target consistent with the State's efforts to reduce GHG emissions, and provides a roadmap for successfully implementing GHG reduction measures selected by the County.

The actions outlined in the CCAP tie the County's existing climate change initiatives together, and provide a blueprint for a more sustainable future. As a component of the General Plan Air Quality Element, the CCAP actions are closely tied to many of the goals, policies, and programs of the General Plan, as well as to several other existing programs in the County. Actions undertaken as part of the CCAP will also result in important community co-benefits, including improved air quality, energy savings, increased mobility, and enhanced community well-being, and will enrich the resiliency of the community in the face of changing climatic conditions. Furthermore, the CCAP satisfies the County's goals of meeting the recommendations for local governments in the Scoping Plan of Assembly Bill (AB) 32, California's Global Warming Solutions Act.

## 1.2 How to Use the CCAP

The CCAP is a resource for the unincorporated areas. Residents, businesses and their employees, community groups, and the public at large are encouraged to participate in community engagement activities for the CCAP, and the implementation of specific CCAP programs, as described in Chapter 5. Throughout the implementation of the CCAP, County staff will work closely with stakeholders to effectively implement the CCAP.

Public agencies and private developers can also use the CCAP to comply with project-level review requirements pursuant to the California Environmental Quality Act (CEQA). CEQA guidelines specify that CEQA project evaluation of GHG emissions can "tier off" a programmatic analysis of GHG emissions, provided that the programmatic analysis (or climate action plan) does the following (CEQA Guidelines Section 15183.5):

- Quantify greenhouse gas emissions, both existing and projected over a specified time period, resulting from activities within a defined geographic area.
- Establish a level, based on substantial evidence, below which the contribution to GHG emissions from activities covered by the plan would not be cumulatively considerable.
- Identify and analyze the GHG emissions resulting from specific actions or categories of actions anticipated within the geographic area.
- Specify measures or a group of measures, including performance standards that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level.

- Monitor the plan’s progress.
- Adopt the GHG Reduction Strategy in a public process following environmental review.

The CCAP meets CEQA Guidelines Section 15183.5 listed above by: 1) quantifying all primary sectors of GHG emissions within the unincorporated areas for 2010 and 2020; 2) including a reduction target of at least 11% below 2010 levels, which is consistent with the recommendations in the AB 32 *Scoping Plan* for municipalities to support the overall AB 32 reduction targets; 3) analyzing community emissions for the unincorporated areas as a whole and including predicted growth expected by 2020; 4) including specific measures to achieve the overall reduction target; 5) including periodic monitoring of plan progress; and 6) submitting the CCAP to be adopted in a public process following compliance with CEQA.

Once the CCAP is adopted, project-specific environmental documents that incorporate applicable CCAP actions can “tier off” the Environmental Impact Report (EIR) certified for the County General Plan and CCAP to meet project-level CEQA evaluation requirements for GHG emissions. Tiering from the General Plan EIR potentially eliminates the need to prepare a quantitative assessment of project-level GHG emissions. Rather, project-specific environmental documents that rely on the CCAP can qualitatively evaluate GHG impacts by identifying all applicable CCAP actions and describing how those actions have been incorporated into the project design and/or identified as mitigation. This type of “tiered” analysis can reduce project costs and streamline the County permit process. Projects that demonstrate consistency with applicable CCAP actions can be determined to have a less than significant cumulative impact on GHG emissions and climate change (notwithstanding substantial evidence that warrants a more detailed review of project-level GHG emissions).

Figure 1-1 shows the benefits of “tiering off” an EIR certified for a climate action plan (also known as “project streamlining”) to meet CEQA requirements.

## CEQA WITH A CCAP



Eligible projects will tier off the environmental document certified for the General Plan and CCAP. The project-level analysis will evaluate consistency with the CCAP policies and goals.

\*The County expects to use the Environmental Impact Report for the Draft General Plan 2035 as the basis for CEQA compliance for this project

## CEQA WITHOUT A CCAP



Project-level GHG analysis for individual projects

A complete analysis of the GHG emissions associated with individual projects is required, including a quantitative demonstration that the project will reduce emissions below the specified level.

**Figure 1-1. Project Streamlining: Benefits of a Climate Action Plan**

## 1.3 Prior County Efforts on Climate Change and Relationship to Other County Plans

The County has long been a leader in addressing climate change. It first began programs to improve its own (municipal) building energy efficiency and resource conservation in the mid-1990s. Since that time, the County has adopted numerous programs that target various types of municipal energy reductions, including a commitment in the Countywide Energy and Environmental Policy to reducing energy use in County-operated buildings by 20% by 2015. To promote leadership on climate change through emissions reporting and verification, the County joined the California Climate Action Registry (CCAR) in 2007. The CCAR is a voluntary GHG reporting registry that promotes early actions to reduce greenhouse gas emissions. At its meeting on October 23, 2007, the County Board of Supervisors agreed to join a coalition of counties throughout the United States by signing the U.S. Cool Counties Climate Stabilization Declaration. The Declaration committed the County to a number of actions on GHG reductions, including working with other governments and leaders to reduce County geographical GHG emissions to 80% below current levels by 2050. The County's Office of Sustainability (COS) was created within the Internal Services Department by the Board of Supervisors in October 2009 to respond to legislation, regulation, and policy related to climate change. The County has also joined the Los Angeles Regional Collaborative for Climate Action and Sustainability (LARC). Through this regional collaborative, the County shares resources with other jurisdictions and encourages collaboration on local efforts to address climate change.

### 1.3.1 General Plan

The General Plan provides the policy framework for growth in unincorporated areas through the year 2035. It is based on current demographic data and reflects regional growth, resource protection regulations, State law, and local ordinances. The General Plan also provides a guide for future land use patterns.<sup>1</sup>

The CCAP, which is based on similar data and assumptions, is a component of the Air Quality Element of the General Plan. The CCAP may be updated without requiring modification to other parts of the General Plan, as the County anticipates updating the CCAP on a periodic basis to reflect any needed changes to emissions data or to CCAP actions in order to continue to achieve the CCAP's goals.

### 1.3.2 Municipal Climate Action Plan

The County is currently developing a Municipal Climate Action Plan (MCAP). The MCAP will include various programs and policies that will reduce municipal GHG emissions to 15% below current levels. The MCAP focuses on GHG emissions that result from the County's municipal operations and does not include GHG emissions generated by the community (i.e., these emissions are included in the CCAP). The MCAP includes municipal emissions from the following sectors: building energy;

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<sup>1</sup> The General Plan Update is currently underway and will replace all elements of the current General Plan.

cogeneration facilities; vehicle fleet; owned landfills; refrigerants; wastewater treatment plants; street and outdoor lighting; water pumps; water conveyance; waste generation; employee commute; and miscellaneous direct emissions.

The MCAP and CCAP are distinct plans with separate approval processes and timelines. However, there may be some minor overlap in the emissions that are accounted for in both plans, particularly in the wastewater, water, lighting, and employee commute emissions sectors where County facilities and actions occur in the unincorporated areas. The emissions in these sectors may be counted as both “municipal” and “community” emissions. For example, employee commute emissions are counted as municipal emissions and included in the MCAP, but may also occur in the unincorporated areas and would therefore be included in vehicle miles traveled data for the unincorporated areas. As such, there may also be some overlap in the associated actions to reduce these emissions, as illustrated in Figure 1-2. Because many of the County’s operations take place within the jurisdiction of cities and pertain only to municipal operations, the County’s municipal emissions have little overlap with community emissions in the unincorporated areas. To the extent that any overlap of programs or policies may occur, the County anticipates working with all appropriate departments and stakeholders to ensure that these programs and policies are developed as efficiently as possible, while still meeting the goals of both plans.

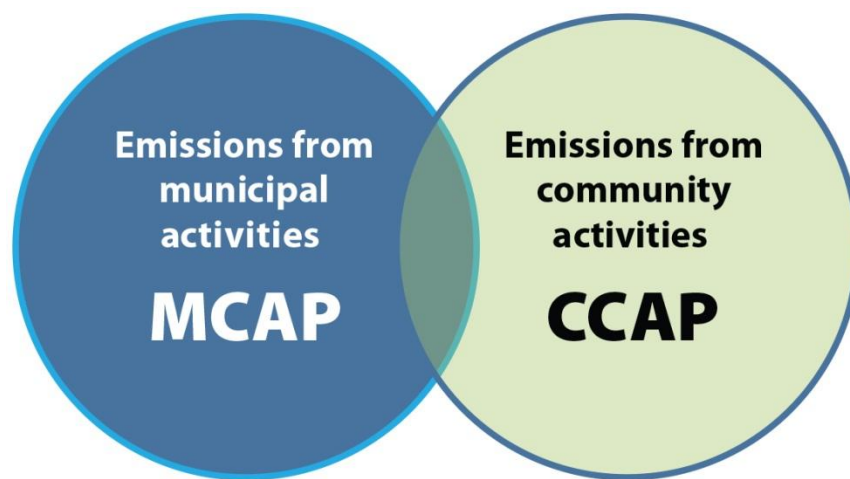
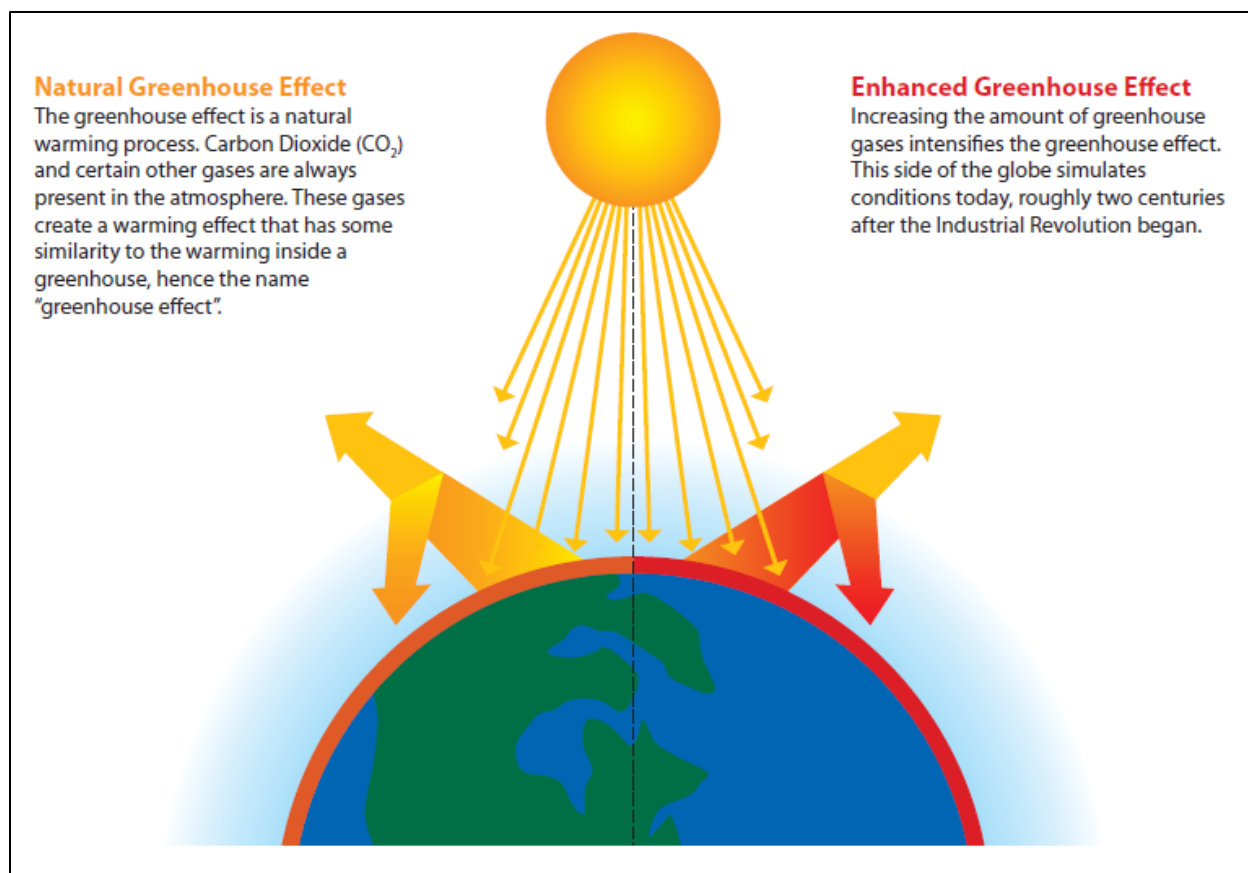


Figure 1-2. MCAP and CCAP Emissions Overlap

## 1.4 Background Information on Climate Change Science

The phenomenon known as the *greenhouse effect* keeps the atmosphere near Earth’s surface warm enough for the successful habitation of humans and other life forms. The greenhouse effect is created by sunlight that passes through the atmosphere (Figure 1-3). Some of the sunlight striking Earth is absorbed and converted to heat, which warms the surface. The surface emits a portion of this heat as infrared radiation, some of which is re-emitted toward the surface by GHGs. Human activities that generate GHGs increase the amount of infrared radiation absorbed by the atmosphere, thus enhancing the greenhouse effect and amplifying the warming of Earth (Center for Climate and Energy Solutions 2011).



**Figure 1-3. The Greenhouse Effect**

Increases in fossil fuel combustion and deforestation have exponentially increased concentrations of GHGs in the atmosphere since the Industrial Revolution. Rising atmospheric concentrations of GHGs in excess of natural levels result in increasing global surface temperatures—a phenomenon commonly referred to as *global warming*. Higher global surface temperatures in turn result in changes to Earth's climate system, including increased ocean temperature and acidity, reduced sea ice, variable precipitation, and increased frequency and intensity of extreme weather events (Intergovernmental Panel on Climate Change 2007a, 2007b). Large-scale changes to Earth's system are collectively referred to as *climate change*.

#### Climate Change and Global Warming

The terms *global warming* and *climate change* are often used synonymously, but they refer to two different processes. Increasing global surface temperatures as a result of rising atmospheric concentrations of GHGs, in excess of natural levels, is known as *global warming*. Large-scale changes to the Earth's system induced by higher global surface temperatures are collectively referred to as *climate change*.

Recent warming trends demonstrate a deviance from the natural pattern. Temperature data recorded by the U.S. Climate Division Database indicates that average annual temperatures in Los Angeles County have increased by 0.3 degrees F per decade between 1945 and 2012. Moreover, 8 of the last 10 years have been warmer than the average annual temperature over this same period (National Oceanic and Atmospheric Administration 2013).

While changes in global climate have been recorded throughout history, there is strong consensus among the scientific community that recent changes are the result of manmade GHG emissions. A recent study published in *Environmental Research Letters* indicates that 97% of climate scientists agree that human activity is “very likely” causing current global warming trends (Cook et al. 2013). Every national academy of science in the world likewise concurs that manmade GHG emissions are accelerating the magnitude and pace of climate change.

AB 32 identifies the following compounds as the major GHGs: carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), perfluorinated carbons (PFCs), sulfur hexafluoride (SF<sub>6</sub>), and hydrofluorocarbons (HFCs). Water vapor is not included in this list because natural concentrations and fluctuations far outweigh anthropogenic influence.<sup>2</sup>

#### Sources, Sinks, and Global Warming Potentials for Greenhouse Gases

Natural and human activities that generate GHGs are commonly referred to as emissions *sources*. The burning of fossil fuels to power buildings and vehicles is the primary source of CO<sub>2</sub> and a key contributor of CH<sub>4</sub> and N<sub>2</sub>O emissions. A GHG *sink* removes and stores GHGs. For example, vegetation is a sink because it removes atmospheric CO<sub>2</sub> during respiration.

GHGs are not created equally. The Global Warming Potential, or GWP, is used to compare GHGs based on their potential to trap heat and remain in the atmosphere. Some gases can absorb more heat than others, and thus have a greater impact on global warming. For example, CO<sub>2</sub> is considered to have a GWP of 1, whereas N<sub>2</sub>O has a GWP of 298. This means that N<sub>2</sub>O is 298 times more powerful than CO<sub>2</sub>.

## 1.5 Local Climate Change Effects and Public Health

### 1.5.1 Local Climate Change Effects

Large increases in global GHG concentrations could have substantial adverse effects on natural and human environments in the unincorporated areas. Current research efforts coordinated through the California Air Resources Board (CARB) and other State agencies examine the specific changes to California’s climate that will occur as Earth’s surface warms. California’s *2012 Vulnerability and Adaptation Study*, the State’s third major assessment on climate change, examines local and statewide vulnerabilities to climate change and includes new data and projections on climate changes in California (California Climate Change Center 2012). The University of California, Los Angeles (UCLA) (2012), in partnership with LARC, recently published several studies that develop climate change predictions that are specific to the greater Los Angeles area. These studies indicate that if GHG emissions continue to increase globally based on current trends, climate change could impact the natural environment in the following ways:

<sup>2</sup> Black carbon and its global warming potential is not addressed in this report. However, a black carbon global warming potential estimate was published this year, based on a major scientific assessment of the black carbon radiative forcing. See Bond et al. 2013 for additional information.



**Increases in Ambient Temperatures:** On average, the Los Angeles region is expected to warm 4 to 5 degrees over land by mid-century. The coasts and oceans will likely warm the slowest, whereas the mountains and deserts will experience more rapid warming. Warming across the region will be greatest in the summer and fall. For the unincorporated areas in particular, UCLA's high emissions modeling scenario predicts that mountain and inland areas may warm up to or greater than 4.5 degrees, and coastal and valley/urban areas warming up to 3.7 to 3.9 degrees (Sun et al. 2013).



**Increases in Extreme Heat Conditions:** Heat waves and very high temperatures could last longer and become more frequent. Extreme heat days are expected to triple in the coastal and central areas; the San Fernando Valley and San Gabriel Valley will witness almost a quadrupling of heat days. The number of extreme heat days in the desert and mountain areas will increase 5 to 6 times relative to the current amounts. For the unincorporated areas in particular, UCLA's high emissions modeling scenario predicts a nearly 12-fold increase in the number of heat days, down to a 1.5- to 2-fold increase for the inland/valley areas (Sun et al. 2013).



**Decreased Snowfall and Winter Snowpack:** The region's mountains could see a 42% reduction in annual snowfall by mid-century. The winter snowpack is also expected to melt 16 days earlier as a result of rising temperatures. As of March 2014, California is facing a severe drought and the snowpack in the Sierra Nevada is 12% of the annual average (California Department of Water Resources 2014). Changes in snowfall could exacerbate drought-like conditions, reducing water supplies and water security for all end users throughout the County.



**Increased Frequency, Intensity, and Duration of Extreme Storms:** Changes in storm events could create conditions that are conducive to air pollution formation, which further exacerbates air quality issues. Increased winter storm events could also affect peak stream flows and flooding.



**Changes in Growing Season and Species Distribution:** Changes in growing season conditions could cause variations in crop quality and yield. Plant and wildlife distributions may also be affected by changes in temperature, competition from colonizing species, regional hydrology, sea level, and other climate-related effects.



**Rising Sea Levels:** Sea levels are expected to steadily rise by mid-century, which could inundate portions of the coastline.

California's Cal-Adapt website presents several climate predictions for Los Angeles County, based on high and low scenarios of future GHG concentrations developed by Santa Clara University, the Scripps Institution of Oceanography, the Pacific Institute, the U.S. Geological Survey, and the University of California, Merced (Cal-Adapt n.d.). Regarding temperature predictions, the projected difference in temperature between the baseline time period (1961 to 1990) and an end-of-century period (2070 to 2090) is +3.8°F (low emissions scenario) and +6.4°F (high emissions scenario). For sea level rise, the Los Angeles County coastal land area vulnerable to a 100-year flood event is projected to increase by 46% by 2100, though these coastal land areas appear largely located within cities. Wildfire projections include slight increases in the amount of area burned in 2085 compared to the current (2010) risk, primarily in the northern and eastern portions of the County.

## 1.5.2 Climate Change and Public Health

Changes in the local climate can have significant and far-reaching public health consequences throughout the unincorporated areas. Sensitive populations—such as children, the elderly, and people with illnesses—are typically the most vulnerable to climate change effects, due to preexisting health or socioeconomic conditions. For example, the California Department of Public Health Environmental Health Tracking Program’s *ASTHO Climate Change Population Vulnerability Screening Tool* identifies elevated climate change risks in urbanized areas, particularly those areas with a high proportion of persons of color (California Department of Public Health n.d.).

Climate change has the potential to affect these and other population groups in direct and indirect ways. For example, increases in ambient temperature can lead to heat-related illnesses and death, whereas changes in disease vectors may lead to increased risk of infectious diseases. Climate change and air pollution are also closely coupled. Ozone and particulate pollution, both of which can negatively impact human health, are strongly influenced by weather and can be concentrated near Earth’s surface during extreme heat events. Increased emergency response to address rising public health concerns from deteriorating air quality and other climate change impacts could strain community and economic resources. Specific to Los Angeles County, the *ASTHO Climate Change Population Vulnerability Screening Tool* highlights areas of elevated climate change risk along coastal areas of the County, largely from risks due to sea level rise, but also partially attributable to poor public transit, wildfire risk, and a large proportion of elderly living alone (California Department of Public Health n.d.).

Evidence indicates that climate change could affect public health and community well-being (Centers for Disease Control and Prevention 2010). Several of the climate change effects listed in Section 1.5.1 are summarized in Table 1-1, with corresponding projected public health impacts (California Department of Public Health 2012).

Although the actions outlined in the CCAP are designed to reduce GHG emissions and contribute to an overall state, national, and global effort to avoid the worst effects of climate change, many of the CCAP actions will also contribute to public health improvements and will result in a healthier and more sustainable way of living. For example, actions designed to reduce vehicle trips and improve the transportation network can also improve air quality by reducing vehicle congestion and fossil fuel combustion. An increase in active transport, such as walking and biking, can also increase physical activity and substantially lower the burden of disease (Maizlish et al. 2011). Similarly, actions to support local food systems will supplement healthy lifestyles throughout the community by improving access to nutritious and locally grown foods.

**Table 1-1. Climate Change Effects and Potential Public Health Impacts**

Climate Change Effect	Potential Public Health Impact
Increases in ambient temperatures	<ul style="list-style-type: none"> <li>• Cardiovascular disease</li> <li>• Increased number and range of: <ul style="list-style-type: none"> <li>○ Vector-borne disease, such as West Nile virus, malaria, Hantavirus, or plague</li> <li>○ Water-borne disease, such as cholera and E. coli</li> <li>○ Food-borne disease, such as salmonella poisoning</li> <li>○ Harmful algal blooms causing skin disease and poisoning</li> <li>○ Allergies caused by pollen and rashes from plants such as poison ivy or stinging nettle</li> <li>○ Vulnerability to wildfires and air pollution</li> </ul> </li> </ul>
Increases in extreme heat conditions	<ul style="list-style-type: none"> <li>• Premature death</li> <li>• Cardiovascular stress and failure</li> <li>• Heat-related illnesses, such as heat stroke, heat exhaustion, and kidney stones</li> </ul>
Increased frequency, intensity, and duration of extreme storms	<ul style="list-style-type: none"> <li>• Population displacement, loss of home and livelihood</li> <li>• Death from drowning</li> <li>• Injuries</li> <li>• Damage to potable water, wastewater, and irrigation systems resulting in a decrease in the quality/quantity of water supply and disruption to agriculture</li> <li>• Water- and food-borne diseases from sewage overflow</li> </ul>
Changes in growing season and species distribution	<ul style="list-style-type: none"> <li>• Changing patterns and yields of crops, pests, and weed species, resulting in higher prices for food and food insecurity, hunger, and malnutrition</li> <li>• Changes in agriculture/forestry, leading to lost or displaced jobs and unemployment</li> </ul>

The diverse public health benefits achieved by the combined implementation of the CCAP actions make climate action planning a mutually beneficial strategy for reducing GHG emissions and for improving community well-being.

## 1.6 Climate Change Regulations and Initiatives

Climate change is widely recognized as an imminent threat to the global climate, economy, and population. Federal regulations continue to evolve to address climate change. For example, President Obama's 2013 Climate Action Plan calls for future limits on GHG emissions from new and existing power plants. California has adopted official legislation (AB 32) to address various aspects of climate change and reduce statewide GHG emissions. AB 32 codified the State's GHG emissions target by requiring that statewide GHG emissions be reduced to 1990 levels by 2020. The AB 32 *Scoping Plan* identifies specific measures to achieve this goal and requires that CARB and other State agencies develop and enforce regulations and other programs for reducing GHGs. Many of the State regulations under AB 32 are aimed at large sources of emissions, such as stationary sources and transportation fuels. The AB 32 *Scoping Plan* also articulates an important

role for local governments in achieving the statewide target, recommending that they establish GHG reduction goals for both their municipal operations and the community, consistent with those of the state.

Please refer to Appendix A for additional information on climate change legislation at the federal, state, and regional levels relevant to the County's climate action planning efforts.

## 1.7 Climate Change Adaptation

The climate in Los Angeles County is already changing. The County recognizes that GHG concentrations in the atmosphere have already risen to a level at which some degree of future climate change will happen. Preparation for these climate changes (also called *climate change adaptation*) is therefore a fundamental component of the County's overall strategy to address climate change.

The County is comprehensively preparing for expected changes in the built and natural environments in Los Angeles as a result of climate change, with particular emphasis on how these expected changes may influence its own operations and the broader community within the unincorporated areas. The County's Chief Executive Office, in conjunction with Public Health, Public Works, Beaches and Harbors, Fire, Internal Services, and Regional Planning is evaluating future climate change scenarios in order to identify and develop climate preparedness strategies. One effort underway is the Los Angeles Basin Stormwater Conservation Study (LA Basin Study) to assess future water supply demands and challenges as a result of climate change. Another effort is the Soil Moisture Project, in which the Fire Department is reviewing its safety protocols and assessing potential increased fire risks. The results of the Soil Moisture Project will be used to advance tactical training for Fire Department personnel and to provide additional public safety education in the face of increasing temperatures and fire conditions.

Climate change preparedness continues to evolve as researchers develop methods to better predict local climate change effects and assess the effectiveness of various preparedness options. The CCAP complements existing climate change adaptation efforts and serves as an essential framework for the County's overall strategy to address climate change. Indeed, many of the CCAP actions have strong linkages to public health and climate change adaptation by reducing energy use during peak demand, reducing the urban heat island effect; increasing access to public transit; encouraging active modes of transportation; improving air quality; connecting public health and other agencies in the County to climate change and emergency planning resources; and encouraging public participation in climate change planning. Information gained through robust planning for climate change effects and GHG emission reduction will ultimately enable the County to make better decisions related to long-term community resiliency.



## Chapter 2

# Emissions Inventory and Forecast

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“This GHG inventory is the foundation of actions to address climate change. Complete, consistent and accurate measurement enables local governments to assess their risks and opportunities, track their progress, and create a strategy to reduce emissions in a quantifiable and transparent way.”

—California Air Resources Board



## 2.1 Introduction

The unincorporated areas comprise of more than 2,600 square miles and are home to over one million residents. These areas are economically, geographically, and socially diverse, which presents unique challenges and opportunities for robust climate action planning. The following is a discussion of 2010 GHG emissions (2010 inventory) and a projection of 2020 emissions (2020 forecast) for community activities within the unincorporated areas. The 2010 inventory and 2020 forecast provide a foundation for the CCAP actions, as well as long-term emissions monitoring.

## 2.2 Overview of Analysis

The 2010 inventory and 2020 forecast include GHG emissions associated with community activities within the unincorporated areas. The inventory also includes emissions that occur outside of the unincorporated areas, but only to the extent that such emissions are the result of community activities. For example, GHG emissions generated by regional power plants to provide electricity to local homes and businesses in the unincorporated areas are considered even though the power plants themselves may not be located within the unincorporated areas.

Emissions generated by community activities were analyzed using widely accepted methodologies and procedures that are used by federal, state, and local air quality management and environmental agencies and that are consistent with the *U.S. Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions* (ICLEI 2012). The 2010 inventory represents the existing emissions level, whereas the 2020 forecast is a prediction of how community emissions may change in the future, in the absence of most State and local actions to reduce GHGs. The 2020 forecast is based on expected growth in the unincorporated area population, employment, and households. Please refer to Appendix B for detailed information on methods and assumptions used to estimate emissions.

The 2010 inventory and 2020 forecast analyze GHG emissions from the following sectors:<sup>3</sup>

- **Building Energy:** Natural gas and electricity consumption from residential, commercial, and industrial buildings within the unincorporated areas.

### Estimating Building Energy Emissions

Here is a quick overview of how GHG emissions are estimated for the building energy sector:

**Step 1:** Determine which utilities supply electricity and natural gas to residents and businesses in the unincorporated areas.

**Step 2:** Obtain annual energy usage from the utilities. Electricity consumption is provided in terms of kilowatt-hours, whereas natural gas usage is provided in terms of therms.

**Step 3:** Multiply electricity and natural gas quantities by GHG emission factors.

**Step 4:** Add emissions from electricity and natural gas to determine total GHG emissions from building energy use.

<sup>3</sup> Note that GHG emissions were quantified in terms of MT CO<sub>2e</sub> emitted per year, which accounts for the relative global warming potential of each GHG.

- **Transportation:** Fuel consumption from on-road and off-road vehicles operating within the unincorporated areas.
- **Water Conveyance and Wastewater Generation:** Electricity consumption associated with water importation, as well as process emissions from wastewater treatment for the unincorporated areas.
- **Waste Generation:** Methane emissions from waste generated by the community within the unincorporated areas.
- **Agricultural Activities:** Nitrogen oxide emissions from fertilizer application and methane emissions from manure management in the unincorporated areas.
- **Stationary Sources:** Fuel consumption from stationary sources located within the unincorporated areas (other than natural gas included in the building energy sector).

## 2.3 Community Emissions Inventory for 2010

Total GHG emissions generated by community activities occurring in the unincorporated areas in 2010 were 7,982,720 MT CO<sub>2</sub>e, which is approximately 1.8% of California's GHG emissions in the same year.

As shown in Table 2-1 and Figure 2-1, building energy use represents the largest source of community emissions (49%) in 2010. Building energy is often one of the largest sources of GHG emissions in community inventories and includes residential, commercial, and industrial components. Transportation emissions are the second largest source of emissions, accounting for 42% of total emissions in the unincorporated areas. Similar to the building energy sector, transportation is typically a considerable component of a community's total GHG emissions, ranging from 30% to 70% depending on other sources and local conditions. The third largest source is waste generation, with a contribution of 7% of the total 2010 inventory. The remaining sources are water conveyance and wastewater generation (2%), agriculture (0.4%), and stationary sources (0.02%).

**Table 2-1. 2010 GHG Inventory for Unincorporated LA County by Sector (MT CO<sub>2</sub>e)**

Sector	2010 Emissions (MT CO <sub>2</sub> e)	Percent of Inventory
Building Energy	3,906,213	49%
Transportation	3,383,711	42%
Waste Generation	535,148	7%
Water Conveyance and Wastewater Generation	126,074	2%
Agriculture	30,290	<1%
Stationary Sources	1,283	<1%
<b>Total</b>	<b>7,982,720</b>	<b>100%</b>

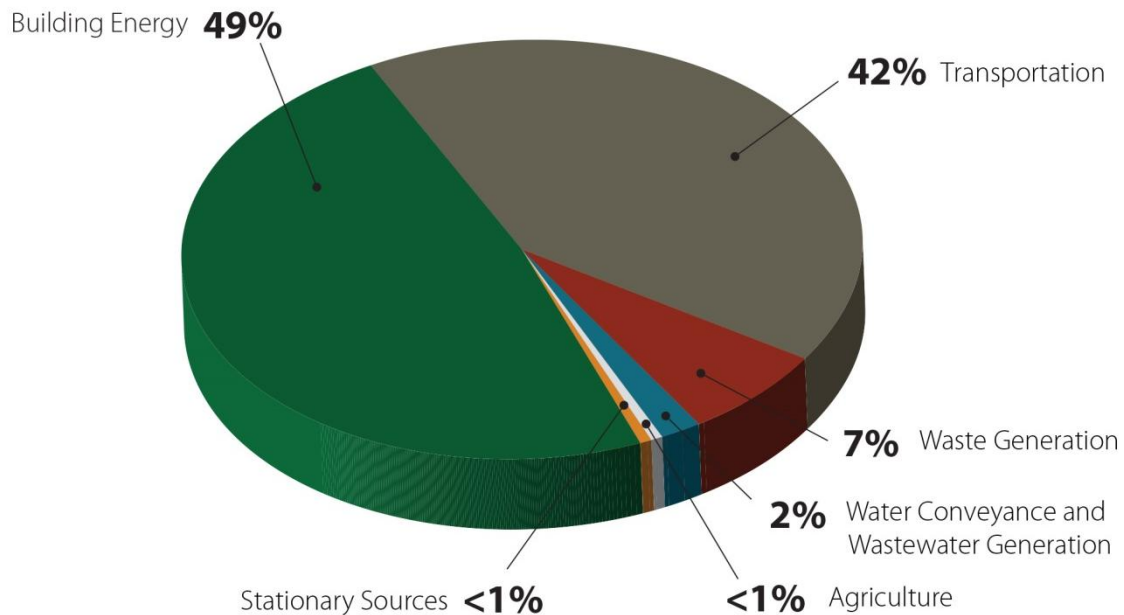


Figure 2-1. 2010 GHG Inventory for Unincorporated LA County by Sector (MT CO<sub>2</sub>e)

## 2.4 Community Emissions Forecast for 2020

The 2020 forecast is a prediction of community emissions that would occur in 2020 without accounting for federal, state, and local actions designed to reduce GHG emissions. The forecast estimates future GHG emissions based on trends in population, households, and employment included in the Southern California Association of Governments' (SCAG) *2012 Regional Transportation Plan/Sustainable Communities Strategy* (RTP/SCS). These growth trends are similar to socioeconomic assumptions outlined in the County's General Plan.

Table 2-2 summarizes the 2020 forecast of GHG emissions for community activities in the unincorporated areas and compares the results to the 2010 inventory. Table 2-2 also shows that GHG emissions are expected to increase by approximately 1 million metric tons (13%) from 2010 to 2020. This growth will occur primarily due to increases in vehicle trips, building energy use, and off-road equipment. As the unincorporated areas grow, transportation activity and energy consumption will increase. Likewise, off-road equipment emissions will increase as a result of increased development and construction activity.

### Is the 2020 Forecast a BAU Projection?

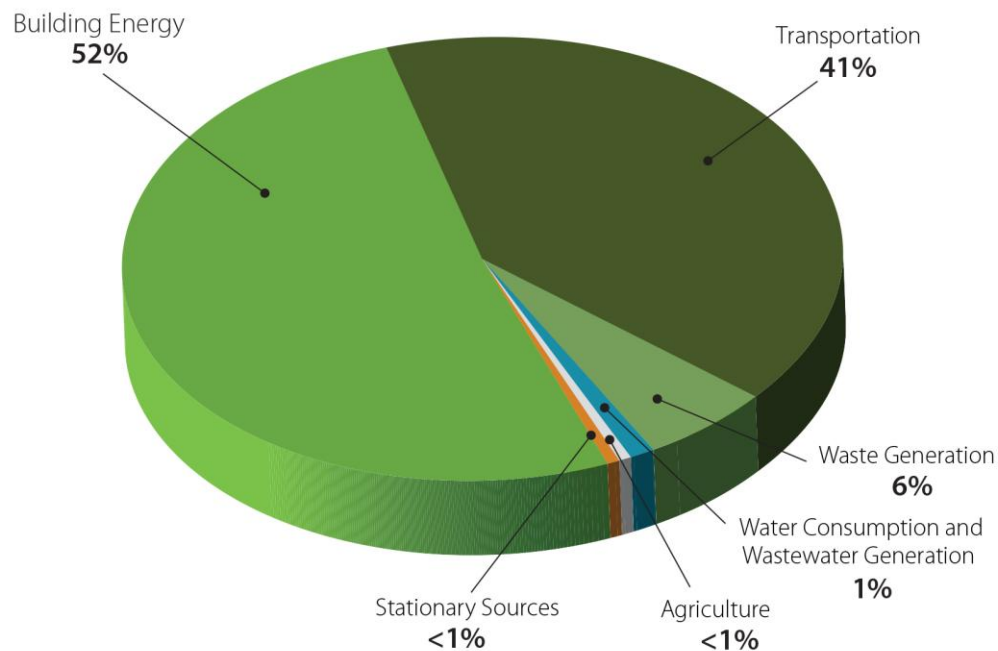
A "business as usual" (BAU) projection is an estimate of future emissions; it does not include the effects of *any* new federal, state, or local measures. The CCAP 2020 forecast is similar to a BAU projection but differs slightly because: 1) the data used to forecast 2020 emissions includes General Plan socioeconomic assumptions; 2) the transportation emissions forecast accounts for future planned highway and transit network improvements; and 3) the building energy sector assumes power generated by the recently closed San Onofre nuclear facility will be replaced by 50% renewable and 50% natural gas sources in the future. Local actions and all other State regulations (e.g., AB 32) are not included in the forecast. Please refer to Appendix B for additional information on this topic.

Assumptions for Southern California Edison's future power generation mix also contribute to the forecasted increase in building energy emissions (please refer to Appendix B for additional information).

GHG emissions from waste generation and agriculture activities are expected to slightly decrease relative to the 2010 inventory. Reductions in waste-related emissions are predominantly a result of improvements in methane capture rate at regional landfills. The decline in agriculture emissions is a result of expected reductions in overall agricultural activity. Despite these changes, the overall emissions profile for the 2020 forecast is similar to the 2010 inventory, with building energy, transportation, and waste generation representing the top three sources of emissions (see Figure 2-2).

**Table 2-2. Summary of the 2020 GHG Forecast for Unincorporated LA County and Comparison to the 2010 Inventory (MT CO<sub>2</sub>e)**

Sector	2020 Emissions	Change from 2010
Building Energy	4,708,344	802,131
Transportation	3,684,329	300,618
Waste Generation	500,952	-34,196
Water Conveyance and Wastewater Generation	130,314	4,239
Agriculture	30,141	-149
Stationary Sources	1,390	107
<b>Total</b>	<b>9,055,469</b>	<b>1,072,750</b>



**Figure 2-2. 2020 GHG Forecast for Unincorporated LA County by Sector (MT CO<sub>2</sub>e)**

A photograph of the Castaic Hydroelectric Plant. In the foreground, a concrete dam structure with multiple vertical pillars is visible, with water flowing over it. Above the dam, a series of large, green, cylindrical pipes or conduits run diagonally across the frame, supported by metal structures. In the background, there are dry, hilly mountains under a clear blue sky. A white cylindrical tank is visible on the right side of the image.

## Chapter 3

# GHG Emissions Reduction Target for 2020

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“Local governments have important roles to play in efforts to reduce greenhouse gas emissions. Local governments are at the forefront of efforts to adapt to the ongoing and anticipated impacts of climate change.”

—Office of the California Governor



## 3.1 Introduction

This section includes a discussion of the County's GHG emissions reduction target. This target is consistent with statewide reductions required under AB 32 and relies in large part upon the statewide reduction strategies anticipated under AB 32. In evaluating its statewide reduction goal, CARB's modeling concluded that California could meet the ambitious AB 32 target while maintaining and enhancing economic growth (California Air Resources Board 2008a). Furthermore, CARB identifies public health benefits as a result of the AB 32 *Scoping Plan*, including reduced premature death, incidences of asthma, lower respiratory symptoms, and work loss days (California Air Resources Board 2008b).

## 3.2 Emissions Reduction Target

The County's GHG emissions reduction target of *at least 11% below 2010 levels by 2020* is consistent with statewide reductions under AB 32.

California's AB 32, the *Global Warming Solutions Act* of 2006, commits to reducing the statewide GHG emissions to 1990 levels by 2020. The CARB AB 32 *Scoping Plan* (2008c) provides a roadmap for achieving these reductions and for meeting this statewide reduction target. Furthermore, the AB 32 *Scoping Plan* states (pp. 27):

...[C]ARB encourages local governments to adopt a reduction goal for municipal operations emissions and move toward establishing similar goals for community emissions that parallel the State commitment to reduce greenhouse gas emissions by approximately 15 percent from current levels by 2020.

In the AB 32 *Scoping Plan*, CARB equates the statewide goal of achieving 1990 emissions levels by 2020 with the goal of reducing "current" emissions levels 15% by 2020. The AB 32 *Scoping Plan* was benchmarked on estimated 2005 to 2008 levels (using estimated emissions for these years only) when CARB recommended the 15% reduction.<sup>4</sup>

CARB released the latest update of the State's GHG inventory in August 2013, providing updated GHG emissions data through 2010. This update shows different inventory levels than those estimated in the AB 32 *Scoping Plan*. Specifically, the updated 2005 to 2008 emissions are considerably lower than the straight-line forecast that used older emissions data from the AB 32 *Scoping Plan* released in 2008. This trend in the emissions data suggests that a smaller percent reduction (i.e., a 10% to 11% reduction) from 2005 to 2008 levels is needed to achieve the 2020 target (than anticipated in the AB 32 *Scoping Plan*). Table 3-1 shows a comparison of the California AB 32 *Scoping Plan* and 2013 inventory statewide data update. For both datasets, Table

<sup>4</sup> At the time of the AB 32 *Scoping Plan* release in 2008, the statewide GHG inventory was only completed through 2004. The emissions for 2005 to 2008 were therefore forecasted using the prior years' inventory data and the 2020 forecast. Those forecasts for 2005 to 2008 showed that the State would need to reduce emissions by 12% to 16% below 2005 to 2008 levels to reach 1990 levels.

3-1 also shows the percent reduction needed to meet 1990 levels from each inventory year. In this table, the 2008 AB 32 *Scoping Plan* data for 2005 to 2008 is based on a *projection* from 2004 to 2020. The 2013 inventory data for 2005 to 2008 is based on the *actual* emissions inventory data for those years.

**Table 3-1. California Emissions and Reductions to 1990**

Year	Gross Emissions (MMT CO <sub>2</sub> e)		Reduction to 1990	
	California 2008 AB 32 Scoping Plan	California 2013 Inventory	California 2008 Scoping Plan	California 2013 Inventory
1990	433.29	433.29	0%	0%
2000	457.29	462.90	5%	6%
2001	473.49	478.36	8%	9%
2002	468.54	475.82	8%	9%
2003	467.42	479.08	7%	10%
2004	484.40	489.18	11%	11%
2005	491.40	482.09	12%	10%
2006	498.40	479.18	13%	10%
2007	505.40	485.54	14%	11%
2008	512.40	483.22	15%	10%
2009	–	454.69	–	5%
2010	–	449.59	–	4%

Note: MMT = million metric tons

As shown in Table 3-1, actual statewide GHG emissions for 2009 and 2010 were significantly less than 2000 to 2008 levels due to the effects of the recent economic downturn in the U.S. It is likely that emissions in Los Angeles County were also affected by the economic downturn. Table 3-1 shows that a reduction target of 4% below 2010 levels achieves the statewide emissions level for 1990, which suggests that a local government could adopt 4% below 2010 levels as a reduction target and match the effort needed to meet AB 32 at the State level. The County instead conducted an analysis to identify a local reduction target from 2010 levels that would be equivalent to the reduction percentages needed at the State level from 2005 to 2008 (pre-recession) levels (i.e., a 10% to 11% reduction from 2010 levels).

To evaluate the reduction percentage, a “back-cast” of emissions was developed for the unincorporated areas for the years 2005 to 2008. The “back-cast” was performed by scaling 2010 emissions for each inventory sector by an appropriate socioeconomic factor for the unincorporated areas to approximate past emissions. As shown in Table 3-2, emissions for the unincorporated areas would need to be reduced by slightly more than 10% below 2010 emissions to be equivalent to a 10% to 11% reduction from estimated 2005 to 2008 emissions, using the same years as the “current” years in the AB 32 *Scoping Plan*, upon which the State’s recommendation for local jurisdictions is based. While a 10% reduction could be argued to be consistent with the AB 32 *Scoping Plan* recommendation, the County is instead proposing a goal of 11% (as a minimum percentage) below 2010 levels for two reasons: 1) in order to be consistent with the percentage reduction needed at State levels from 2005 to 2008; and 2) in order to account for potential uncertainty in the prediction of the “back-cast.”

**Table 3-2. Los Angeles County Back-Cast Emissions and Reductions to Be Consistent with AB 32**

<b>Year</b>	<b>Estimated Gross Emissions (MMT CO<sub>2</sub>e)</b>	<b>Reductions Based on 2013 State Inventory</b>	<b>Target Emissions for LA County</b>
2005	8.10 (back-cast)	10% (Table 3-1)	7.28
2006	8.18 (back-cast)	10% (Table 3-1)	7.40
2007	8.17 (back-cast)	11% (Table 3-1)	7.30
2008	8.14 (back-cast)	10% (Table 3-1)	7.30
2009	8.00 (back-cast)	-	7.62
2010	7.98 (County inventory)	<b>11% (Proposed)</b>	<b>7.10</b>

Note: MMT = million metric tons

### 3.3 Meeting the Emissions Reduction Target

Together, the local community and statewide actions described in the County's CCAP (Chapter 4) would reduce 2020 GHG emissions within the unincorporated areas by more than 1.9 million MT CO<sub>2</sub>e. As shown in Table 3-3 and Figure 3-1, approximately 80% and 20% of the GHG reductions achieved by the CCAP are attributed to State- and community-level programs (rows D and E in Table 3-3), respectively. The combined effect of State and local actions provides sufficient emissions reductions to exceed the County's GHG target by about 4,700 MT CO<sub>2</sub>e. Actions not currently quantified will likely contribute additional reductions to the County's goal.

**Table 3-3. Summary of State and Local GHG Reductions (MT CO<sub>2</sub>e)**

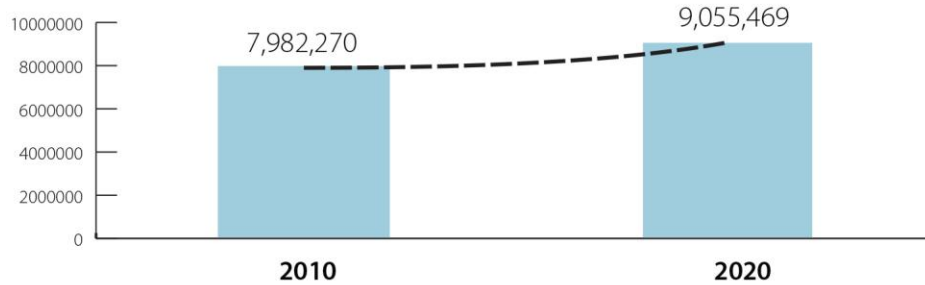
<b>Parameter</b>	<b>GHG Emissions (MT CO<sub>2</sub>e)</b>
Unincorporated LA County 2020 Forecast	9,055,469
Target for 2020—at least 11% below 2010 levels	7,104,621
<i>Total<sub>1</sub> Reductions Needed to Reach Interim Target (2020 forecast minus 2020 target)</i>	<i>1,950,849</i>
Total Reductions from State level actions (Table 4-3)	1,571,526
Total Reductions from local programs (Table 4-1)	384,045
<i>Total<sub>2</sub> GHG Reductions Achieved by the CCAP (State plus local reductions)</i>	<i>1,955,570</i>
Exceeds Reduction Target by (Total <sub>2</sub> minus Total <sub>1</sub> )	4,722

## LA County CCAP GHG Emissions Reduction Target:

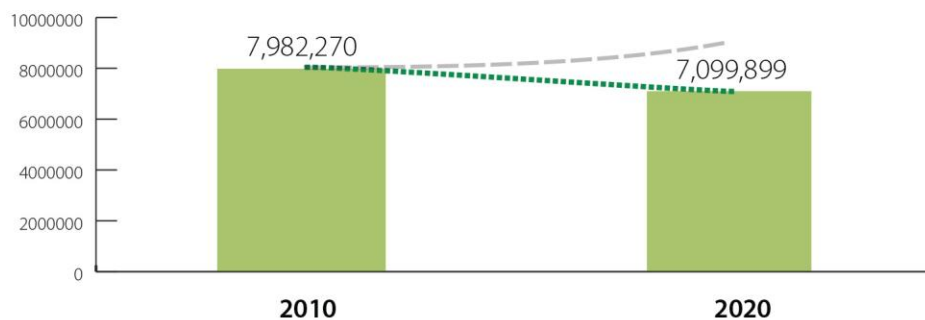
at least 11% below 2010 levels

Reductions Needed to Reach Target:	1,950,849 MT CO <sub>2</sub> e
Emissions Reductions Achieved by the CCAP:	1,955,570 MT CO <sub>2</sub> e
CCAP Exceeds Target By:	4,722 MT CO <sub>2</sub> e

### LA County Unincorporated GHG Emissions without the CCAP (in MT CO<sub>2</sub>e)



### LA County Unincorporated GHG Emissions with the CCAP (in MT CO<sub>2</sub>e)



**Figure 3-1. Summary of State and Local GHG Reductions (MT CO<sub>2</sub>e)**

#### Emissions Reductions in Context

Implementation of the CCAP would avoid the generation of more than 1.9 million MT CO<sub>2</sub>e, which is equivalent to the following actions in 2020 (U.S. Environmental Protection Agency 2013):

- Removing more than 410,000 passenger vehicles from the road.
- Reducing gasoline consumption by more than 220 million gallons.
- Providing renewable energy to power over 178,000 homes.

## Chapter 4

# Actions to Reduce Greenhouse Gas Emissions

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“Appropriate mitigation and adaptation strategies will positively affect both climate change and the environment, and thereby positively affect human health.”

—National Institute of Environmental Health  
and Sciences



## 4.1 Introduction

Implementing the CCAP will reduce future communitywide GHG emissions in the unincorporated areas in a manner that is consistent with statewide goals outlined under AB 32. The following sections describe State and local actions to reduce GHG emissions, summarize anticipated emissions reductions, and present the results of a cost-benefit analysis. Please refer to Appendix C for detailed information on individual actions.

## 4.2 The CCAP Framework

### 4.2.1 CCAP Actions

The CCAP comprises a variety of State and local actions to reduce GHG emissions within the unincorporated areas. Statewide efforts to reduce GHG emissions are a fundamental part of the County's CCAP. For example, the State's Renewables Portfolio Standard (RPS) will reduce the carbon content of electricity throughout the state, including in Los Angeles County. Electricity provided to the County will therefore be cleaner and less GHG intensive than if the RPS had not been established. The CCAP includes the local impact of five State actions to reduce GHG emissions, as discussed further in Section 4.5.

The County has identified 26 local actions to supplement the statewide initiatives. Although identified individually in the CCAP, these actions will be implemented together as part of a comprehensive GHG emissions reduction program. Coordinating GHG reduction programs will streamline CCAP implementation and potentially boost GHG reduction outcomes through synergies created among measures.

The majority of the 26 local actions include voluntary, incentive-based programs that will reduce emissions from both existing and new development in the County. Several other actions will be implemented by the County or other agencies within the region. A small subset of actions will establish mandates for development, either pursuant to State regulations or through existing County programs. Together, the CCAP actions will improve building energy efficiency and renewable energy production, increase alternative modes of transportation, enhance open spaces, and reduce water consumption and waste generation. The actions were selected following a comprehensive review of candidate strategies recommended by the California Attorney General, California Air Pollution Control Officers Association (CAPCOA), existing CAPs throughout California, and the General Plan. Appendix D includes a cross-reference of the CCAP actions to General Plan policies and other existing County programs.

A number of the actions build on existing County programs, whereas others provide new opportunities to address climate change. Successful implementation of these actions will require commitment and dedication from the County, its various departments, and its residents. As discussed in Chapter 5, the County will adaptively manage the implementation of the CCAP to maximize GHG reductions and operational efficiency for each action. Accordingly, the County may revise actions or add new actions to ensure that the County achieves its GHG reduction target for the unincorporated areas (see Chapter 3). If adopted and implemented prior to 2020, new federal

programs that achieve local GHG reductions beyond State and local mandates may also be added to the County's CCAP.

The County will develop and lead the implementation of the majority of the 26 local actions. However, for a few of the CCAP actions, another local agency, such as operators of wastewater treatment facilities, will have primary responsibility for measure development. The County anticipates supporting the lead entities for these actions, as needed, to identify targets and other strategies for implementation. Despite the County's supporting role, these actions are considered a critical component of a comprehensive CCAP, as many the actions build upon and expand existing programs. Please refer to Chapter 5 and Appendix C for additional information on lead entities for each action.

## 4.2.2 Community Co-Benefits

The CCAP will reduce GHG emissions within the unincorporated areas and will provide a vehicle for addressing climate change. Private residents, businesses, utilities, and other public sector agencies will incur some costs to implement and achieve the GHG reduction measures in the CCAP. In some cases, these entities will also realize long-term savings that can help recoup their initial investments. Indeed, some of the most cost-effective actions—with the biggest GHG reductions—can be found in the building energy sector, with several energy efficiency investments able to recoup initial costs in one to five years.

In addition to cost savings, implementing the CCAP will result in environmental and community benefits that supplement the expected GHG emission reductions. For example, many of the actions will reduce criteria air pollutants in the unincorporated areas, including ozone, carbon monoxide, and fine particulates, which will improve public health. Measures to improve mobility and alternative modes of transportation will enhance walkability and mobility throughout the community. Active transport, like walking and biking, has been shown to substantially lower the burden of disease. These strategies can also complement and encourage other, more sustainable modes of transportation, including public transit (Maizlish et al. 2011).

Several actions directly target resource efficiency within the unincorporated areas. Building energy and transportation actions will reduce electricity, natural gas, and gasoline usage, which may help lessen consumer sensitivity to increases in future energy prices. Reducing gasoline consumption has an additional benefit of reducing dependence on foreign oil supplies. Recycling and waste diversion programs will also reduce material consumption and the need for landfill space. Water efficiency improvements and land use measures will conserve natural resources and the long-term viability of



the County's natural spaces. Open spaces may also offer aesthetic and recreational benefits for community members, as well as habitat for native wildlife and plants.

The combined implementation of the CCAP actions provides an opportunity to lower carbon emissions and achieve a diverse suite of community co-benefits. Section 4.3 provides additional information on the relevant co-benefits for each CCAP strategy area.

## 4.3 Strategy Areas to Reduce Greenhouse Gases

The 26 local community actions to reduce GHG emissions from the County's community activities are grouped into the following five strategy areas. These strategy areas align with the County's primary emissions sources described in Chapter 2 and will provide targeted GHG reductions throughout the unincorporated areas.<sup>5</sup>



**Green building and energy:** Building energy consumption accounts for about 49% of the County's GHG inventory. The County has already developed and implemented a number of energy efficiency and renewable energy programs to reduce building energy related emissions. Additional strategies include expanding green building initiatives and popular efficiency programs that are not only cost-effective, but also deliver community co-benefits.



**Land use and transportation:** As a significant portion of the County's emissions are from on-road transportation sources, which is the case with most communities in the state, developing realistic ways to reduce vehicle trips and vehicle miles traveled (VMT), improve vehicle fuel economy, and reduce the carbon intensity of transportation fuels is an important strategy for the CCAP (Urban Land Institute 2007). Opportunities to address transportation-related emissions include changes in density and mixed use, increased transit, enhanced pedestrian and bicycle trails, and expanded incentives and opportunities for alternative modes of transportation and electric vehicle (EV) charging.



**Water conservation and wastewater:** Water conservation has been an important management objective for the County over the past several decades. Additional strategies to further reduce GHG emissions from community water consumption and wastewater generation focus on optimizing the operation of pumping infrastructure and expanding water conservation.



**Waste reduction, reuse, and recycling:** While waste production represents a small portion of the County's inventory, a number of cost-effective and relatively simple activities can be undertaken to increase the volume of waste that is either recycled or composted.

<sup>5</sup> Note that because agricultural emissions are minor components of the County's inventory (see Table 2-1), a specific strategy area for agricultural activities is not included in the CCAP. However, several land use and transportation and land conservation actions may have corresponding GHG reduction benefits in the agricultural sector.



**Land conservation and tree planting:** The unincorporated areas support a diversity of natural resources and habitats. Expanding and enhancing these areas not only contributes to GHG emissions reductions, but also provides recreational opportunities and a variety of other community co-benefits.

The following sections provide an overview of each of the five strategy areas, including the local actions, anticipated GHG reductions, co-benefits, and costs and savings. Please refer to Appendix C for specific details and goals of each local action.



Residential and non-residential buildings within the unincorporated areas annually consume over 10,700 gigawatt-hours of electricity and 174 million therms of natural gas. Resources used to generate electricity, as well as the direct combustion of natural gas, emit more than 3.9 million MT CO<sub>2</sub>e, making building energy use the largest source of community emissions (49%) in 2010. Increases in population and employment activity, coupled with rising temperatures and cooling demands, will continue to increase building energy use and associated GHG emissions unless prudent steps are taken to curb energy consumption.

Actions to address GHG emissions from building energy use are typically separated into two categories: energy efficiency and renewable energy. Energy efficiency measures reduce actual energy consumption through efficient design, whereas renewable energy measures reduce the carbon intensity of

electricity generation. All building energy reduction measures have upfront costs, but they usually result in long-term cost savings through reduced utility bills. Building energy measures also achieve a diverse suite of community co-benefits, including reduced regional criteria pollutant emissions, improved home values, enhanced energy security, and job creation.

The County has identified seven actions to help reduce GHG emissions generated by building energy consumption. Two key actions, *BE-1: Green Building Development* and *BE-2: Energy Efficiency Programs*, focus on residential and nonresidential energy efficiency improvements in new and existing buildings. *BE-1: Green Building Development* encourages future development to voluntarily exceed the requirements of Title 24, California's Building Code, that are applicable at

#### Solar Water Heating

Your roof is prime real estate for reducing your impact to the climate in a variety of ways. Most people are familiar with solar energy being used to create electricity to power appliances, but there are other ways to harness the sun's energy. Solar water heating involves using solar collectors on your roof that heat up water to offset traditional, energy-intensive water heaters. Programs for rooftop solar, including solar hot water heating, are proposed as part of *BE-3, Solar Installations*.

the time new development is approved. The action will accelerate the County's energy efficiency efforts for new development and will provide regulatory incentives, as well as other support that can be leveraged during project implementation. Similar support will also be provided for homeowners and businesses through *BE-2: Energy Efficiency Programs*, which promotes efficiency retrofits of existing buildings.

#### Cool Roofs

Temperatures in Los Angeles County are expected to increase by 4° to 5° F, on average, by mid-century. For residents, increased temperatures mean more extreme heat days, higher energy bills, and poorer air quality. Cool roofs are designed to keep our homes, businesses, and communities cooler. Cool roofing products are competitively priced and they are no more difficult to install than an ordinary roof. By reducing internal air temperatures by 3 to 12° F, cool roofs can provide significant savings on your energy bills, while helping to lower ambient temperatures outside. More information about cool roof technology is available at [www.coolroofs.org](http://www.coolroofs.org). Cool roofs are proposed as part of the Heat Island Mitigation Plan (BE-1).

The majority of GHG reductions in the building energy sector are achieved by actions to increase renewable energy generation in the unincorporated areas. *BE-3: Solar Installations* encourages existing and future development to voluntarily install solar photovoltaic systems, where economically and technically appropriate. The action supports project developers and current property owners by promoting low-interest financing and streamlining regulatory procedures

related to renewable energy installations. *BE-4: Alternative Renewable Energy Programs* complements *BE-3: Solar Installations* by exploring opportunities to expand wind, geothermal, and hydropower resources throughout the County. Developing these resources will diversify the County's electricity portfolio and improve the flexibility and resiliency of power delivery.

Additional actions included in the County's CCAP that will contribute to future GHG reductions in the building energy sector, but have not yet been quantified, include efficiency retrofits at regional wastewater treatment plants and landfills and increased support for renewable biogas projects. The County is not the lead implementation agency for these actions, but will work collaboratively to support these actions.



Vehicle trips made by residents and employees are expected to increase steadily as new housing units are developed, new businesses are created or expanded, and new services are provided. By 2020, GHG

emissions generated by transportation activities are expected to exceed 3.7 million MT CO<sub>2</sub>e and represent about 41% of the 2020 forecast for the unincorporated areas. Actions to reduce VMT, improve vehicle fuel economy, and reduce the carbon intensity of transportation fuels are therefore essential to the County's GHG reduction strategy. These measures can also have far-reaching community co-benefits, including reduced formation of smog and toxic air containments. Alternative modes of transportation, such as walking and biking, may also help increase physical activity levels.

The County's land use and transportation strategy area includes a diverse set of 12 actions to reduce GHG emissions from on-road vehicles and off-road equipment (e.g., construction equipment). The actions recognize that an effective emissions reduction policy for the transportation sector must include strategies to improve mobility and access, while at the same time supporting overall transportation efficiency and new forms of travel.

Accordingly, several of the land use and transportation actions promote an integrated, multi-modal transportation network that will support alternative forms of transportation. For example, *LUT-1: Bicycle Programs and Supporting Facilities* and *LUT-2: Pedestrian Network* provide incentives and programs to expand the County's bicycle and pedestrian network. *LUT-3: Transit Expansion* will create bus priority lanes and improve transit facilities and amenities. Other actions, such as *LUT-5: Car Sharing Program*, promote shared use of private and employer-owned vehicles. Together, these actions will reduce VMT and remove vehicles from the road, which can reduce congestion, vehicle delay, and vehicle idling and improve overall vehicle fuel economy.

In addition to supporting alternative transportation, a number of actions promote reduced vehicle travel and improvements to the existing efficiency of the transportation network. *LUT-4: Travel Demand Management* encourages ride-sharing programs and employer-sponsored vanpools to reduce peak-period vehicle trips. *LUT-6: Land Use Design and Density* directly targets land use patterns to support mobility and improve the diversity of urban and suburban developments. Finally, *LUT-7: Transportation Signal Synchronization Program (TSSP)*, *LUT-10: Efficient Goods Movement*, and *LUT-11: Sustainable Pavements Program* include County efforts to improve the efficiency of existing roadways and transportation infrastructure.

#### Cool Pavements

Dark asphalt absorbs as much as 95% of the sun's heat, causing surrounding neighborhoods to heat up by as much as 2° to 6° F, which makes hot summer days even warmer. Cool pavements use lighter colored materials to reflect heat and can significantly reduce ambient air temperatures, while providing a number of co-benefits such as: improved air quality and lower energy demand for cooling. The reduced temperatures also help protect public health by reducing the risks of heat-related injuries and deaths, as well as improving visibility at night. Cool pavements are proposed as part of *LUT-10, Sustainable Pavements Program*.

#### Bicycle Programs

Bicycling is growing in popularity throughout the Los Angeles region. With nearly year-round sunshine, using a bike to replace short trips is a great way for people to reduce pollution and greenhouse gas emissions. According to AAA of Southern California, half of all car trips are shorter than 3 miles and 40 percent are less than 2 miles. Next time you are heading out for a quick errand, consider taking the bike instead. For resources and information on bicycling see [www.la-bike.org](http://www.la-bike.org). Additional bike programs are proposed as part of *LUT-1, Bicycle Programs and Supporting Facilities*.

Finally, the land use and transportation strategy area includes one action to improve the overall carbon intensity of the transportation sector. Specifically, LUT-8: *Electric Vehicle Infrastructure* promotes electric vehicles, which are less carbon intensive per vehicle mile than traditional gasoline-powered cars.

Specific strategies to reduce GHG emissions generated by off-road equipment are also included in the CCAP. These actions establish idling and electrification goals for heavy-duty construction equipment and incentive programs for electric landscaping equipment.



The water conveyance and wastewater generation strategy represents about 2% of the County's GHG inventory. Water treatment and distribution also result in emissions, but are included in the building energy sector for accounting purposes. Although it is a relatively small component of the County's GHG portfolio, homes and businesses throughout the County consume a significant amount of water through indoor plumbing and outdoor irrigation. It is estimated that an average three-bedroom home uses 174,000 gallons of water each year. Given the arid climate in Southern California, as well as the potential for further reductions in water supplies as a result of climate change, conserving water for future generations is a critical strategy area for the CCAP.

The County has identified two actions to enhance community water conservation and management. Water conservation efforts can greatly decrease the demand for available water. Accordingly, *WAW-1: Per Capita Water Use Reduction Goal* and *WAW-2: Recycled Water Use, Water Supply Improvement Programs, and Stormwater Runoff* will simultaneously help reduce GHG emissions and contribute to the adaptive capacity of the water system. Specifically, *WAW-1: Per Capita Water Use Reduction Goal* outlines strategies to help reduce water consumption consistent with Senate Bill (SB) X7-7. SB X7-7 requires urban water agencies throughout California to help achieve the statewide goal of a 20% per

#### Water Conservation Strategies

There are several easy ways to reduce water use in your home. Upgrading your landscape and irrigation is one way that will conserve outdoor water and reduce your monthly expenses. You can replace grass with plants that thrive in dry conditions or add mulch with drip irrigation or micro-sprinklers. Fixing water leaks is also an important way to conserve indoor water. As a homeowner or renter, the best way to determine if you have a leak is to turn off all taps and see if the dials still turn on your water meter. Finally, greywater systems can also reduce potable water demand. These systems capture everything except your toilet and kitchen water and reuse the captured water for irrigation outside the home. Find out ways to reduce your water consumption at <http://www.bewaterwise.com/>.

capita water use reduction by 2020. *WAW-1: Per Capita Water Use Reduction Goal* identifies a variety of strategies that the County, in conjunction with local urban water agencies, will implement to promote water conservation throughout the unincorporated areas. These strategies range from water efficiency retrofits to “smart gardening” campaigns to reduce outdoor water use. *WAW-2: Recycled Water Use, Water Supply Improvement Programs, and Stormwater Runoff* will complement per capita water reduction efforts by promoting recycled water and policies to better manage stormwater to protect local groundwater supplies.



Each year, residents and businesses in the unincorporated areas generate more than 755,000 tons of waste. The County has established a comprehensive collection system that is designed to reduce the amount of trash sent to regional landfills. These programs collectively divert more than 50% of waste generated to recycling centers and other end uses.

For the County’s unincorporated areas, the County intends to adopt a waste diversion goal to comply with all state mandates associated with diverting from landfill disposal at least 75% of the waste by 2020. The County recognizes that residents and business will play a vital role in achieving this goal. Accordingly, *SW-1: Waste Diversion Goal* outlines a number of local recycling and composting initiatives that the County will implement in conjunction with waste service providers throughout the community. Increased outreach and education are important tools that the County will utilize to help optimize participation in recycling and diversion programs. Together, the strategies identified under *SW-1: Waste Diversion Goal* will enable the County to achieve its waste reduction goal and support statewide efforts to reduce landfilled waste under Assembly Bill 341.<sup>6</sup>

<sup>6</sup> Assembly Bill 341 (Commercial Recycling) sets a statewide goal of 75% from source reduction, recycling, and composting.



\*Analysis only reflects costs and savings associated with LC-1.


Natural communities and urban forests are dynamic ecosystems that provide environmental and aesthetic benefits. These areas help clean the air and water, strengthen the quality of place, reduce stormwater runoff, and create walkable communities. Natural communities and urban forests are generally considered *emissions sinks* because they sequester or remove atmospheric CO<sub>2</sub>. The County has been actively involved in programs to increase and maintain existing natural areas. The CCAP builds on these programs through four key actions related to land conservation and tree planting.

The CCAP supports both protection of existing natural spaces and restoration and revegetation of previously disturbed areas. *LC-1: Develop Urban Forests* expands urban forests in the unincorporated areas by encouraging new trees to be planted in urban areas. *LC-2: Create New Vegetated Open Space* likewise promotes the restoration of previously settled land to increase carbon sequestration. The CCAP also includes measures to protect existing conservation areas, including oak woodlands, hillsides, and ridgelines. Other actions in the County's CCAP that will contribute to future GHG reductions include incentives for local farmers markets and additional protection of existing land conservation areas (*LC-3: Promote the Sale of Locally Grown Foods and/or Products* and *LC-4: Protect Conservation Areas*).


## 4.4 Summary of Emissions Reductions and Cost Effectiveness by Action




The strategy areas discussed above provide a comprehensive approach to reduce GHG emissions generated by community activities in the unincorporated areas. Emissions reductions achieved by each of the 26 local actions included in the five strategy areas are summarized in Table 4-1. It is important to note that not all actions currently support a quantitative analysis of potential emissions reductions. Actions led by an entity other than the County are also not quantified or counted towards the County's GHG reduction target for 2020. Although these actions would reduce GHG emissions, the County is not solely responsible for the timing, nature, or complete funding of required improvements. Non-quantified actions are listed with an *estimated* GHG reduction potential of high, medium, or low. Despite this, these measures are still a vital part of the County's CCAP and ensure a comprehensive approach to GHG emissions reductions. Future implementation steps and monitoring of these actions may result in sufficient data to quantify the GHG reductions they achieve.

Table 4-1. Summary of Local Actions and Associated 2020 GHG Emissions Reductions

Strategy Area				Action	Goal Summary	2020 Emissions Reduction (MT CO <sub>2</sub> e) <sup>a</sup>
 Green Building and Energy	BE-1	Green Building Development	Promote and incentivize at least Tier 1 voluntary standards within CALGREEN for all new residential and nonresidential buildings. Develop a heat island reduction plan and facilitate green building development by removing regulatory and procedural barriers.		726	
	BE-2	Energy Efficiency Programs	Energy efficiency retrofits for at least 25% of existing commercial buildings over 50,000 square feet and at least 5% of existing single family residential buildings.		46,298	
	BE-3	Solar Installations	Promote and incentivize solar installations for new and existing homes, commercial buildings, carports and parking areas, water heaters, and warehouses.		92,944 <sup>b</sup>	
	BE-4	Alternative Renewable Energy Programs	Implement pilot projects for currently feasible wind, geothermal, and other forms of alternative renewable energy. <sup>7</sup>		Medium	
	BE-5	Wastewater Treatment Plant Biogas	Encourage renewable biogas projects.		Low	
	BE-6	Energy Efficiency Retrofits of Wastewater Equipment	Encourage the upgrade and replacement of wastewater treatment and pumping equipment.		Low	
	BE-7	Landfill Biogas	Partner with the owners and operators of landfills with at least 250,000 tons of waste-in-place to identify incentives to capture and clean landfill gas to beneficially use the biogas to generate electricity, produce biofuels, or otherwise offset natural gas or other fossil fuels.		Medium	

<sup>7</sup> Potential future forms of non-GHG energy could include nuclear fusion, which is being researched by many parties, including the Lockheed Martin Skunk Works in Palmdale, but which has not yet been experimentally proven as a viable commercial energy source. As new technologies become proven, the County will consider how they can support further development and deployment of such technologies.

Strategy Area	Action	Goal Summary	2020 Emissions Reduction (MT CO <sub>2</sub> e) <sup>a</sup>
 Land Use and Transportation	LUT-1	Bicycle Programs and Supporting Facilities Construct and improve bicycle infrastructure to increase biking and bicyclist access to transit and transit stations/hubs. Increase bicycle parking and “end-of-trip” facilities.	7,774 <sup>c</sup>
	LUT-2	Pedestrian Network Construct and improve pedestrian infrastructure to increase walking and pedestrian access to transit and transit stations/hubs. Program the construction of pedestrian projects toward the goal of completing 15,000 linear feet of new pedestrian improvements/amenities per year.	3,924 <sup>c</sup>
	LUT-3	Transit Expansion Collaborate with the Los Angeles County Metropolitan Transportation Authority (Metro) on a transit program that prioritizes transit by creating bus priority lanes, improving transit facilities, reducing transit-passenger time, and providing bicycle parking near transit stations. Construct and improve bicycle, pedestrian and transit infrastructure to increase bicyclist and pedestrian access to transit and transit stations/hubs.	2,230
	LUT-4	Travel Demand Management Encourage ride- and bike-sharing programs and employer-sponsored vanpools and shuttles. Encourage market-based bike sharing programs that support bicycle use around and between transit stations/hubs. Implement marketing strategies to publicize these programs and reduce commute trips.	9,416
	LUT-5	Car-Sharing Program Implement a car-sharing program to allow people to have on-demand access to a shared fleet of vehicles.	2,223
	LUT-6	Land Use Design and Density Promote sustainability in land use design, including diversity of urban and suburban developments.	27,956
	LUT-7	Transportation Signal Synchronization Program Improve the network of traffic signals on the major streets throughout LA County.	72,499
	LUT-8	Electric Vehicle Infrastructure Install 500 electric vehicle (EV) charging facilities at County-owned public venues (e.g., hospitals, beaches, stand-alone parking facilities, cultural institutions, and other facilities) and ensure that at least one-third of these charging stations will be available for visitor use.	2,682
	LUT-9	Idling Reduction Goal Encourage idling limits of 3 minutes for heavy-duty construction equipment, as feasible within manufacturer’s specifications.	360

Strategy Area				Action	Goal Summary	2020 Emissions Reduction (MT CO <sub>2</sub> e) <sup>a</sup>
	LUT-10	Efficient Goods Movement	Support regional efforts to maximize the efficiency of the goods movement system throughout the unincorporated areas.	Low		
	LUT-11	Sustainable Pavements Program	Reduce energy consumption and waste generation associated with pavement maintenance and rehabilitation.	Medium		
	LUT-12	Electrify Construction and Landscaping Equipment	Utilize electric equipment wherever feasible for construction projects. Reduce the use of gas-powered landscaping equipment.	Low		
 Water Conservation and Wastewater	WAW-1	Per Capita Water Use Reduction Goal	Meet the State established per capita water use reduction goal, as identified by SB X7-7 for 2020.	101,651 <sup>d</sup>		
	WAW-2	Recycled Water Use, Water Supply Improvement Programs, and Storm Water Runoff	Promote the use of wastewater and gray water to be used for agricultural, industrial, and irrigation purposes. Manage stormwater, reduce potential treatment, and protect local groundwater supplies.	23 <sup>e</sup>		
 Waste Reduction, Reuse, and Recycling	SW-1	Waste Diversion Goal	For the County’s unincorporated areas, adopt a waste diversion goal to comply with all state mandates associated with diverting from landfill disposal at least 75% of the waste by 2020.	12,212		
 Land Conservation and Tree Planting	LC-1	Develop Urban Forests	Support and expand urban forest programs within the unincorporated areas.	1,126		
	LC-2	Create New Vegetated Open Space	Restore and re-vegetate previously disturbed land and/or unused urban and suburban areas.	Low		
	LC-3	Promote the Sale of Locally Grown Foods and/or Products	Establish local farmers markets and support locally grown food.	Low		
	LC-4	Protect Conservation Areas	Encourage the protection of existing land conservation areas.	Low		

**Notes for Table 4-1.**

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- a. Actions are evaluated based on their emissions reduction potential in 2020. Anticipated reductions for actions that currently do not support a quantitative analysis are qualitatively assessed as low, medium, or high based on the following emissions criteria.  
 Low = <1,000 MT CO<sub>2</sub>e reduction  
 Medium = 1,000 to 100,000 MT CO<sub>2</sub>e reduction  
 High = >100,000 MT CO<sub>2</sub>e reduction
- b. Emissions reductions assume implementation of solar PV; however, project applicants can install other solar technologies (e.g., solar thermal), as feasible, which may increase GHG reductions, relative to standard PV systems.
- c. It is likely the addition of bicycle and pedestrian facilities will reduce shorter vehicle trips (i.e., less than 4 miles), rather than long-distance commutes. While many of these trips will likely be made on local roadways, it is speculative to assign a specific vehicle speed to the trip or assume that 100% of the trips would be made at lower speeds (e.g., less than 35 miles per hour). Accordingly, emissions reductions are conservatively calculated using an aggregate emission factor for all vehicle speeds (0 to 75 miles per hour). For reference, if all VMT reductions associated with LUT-1 and LUT-2 occurred at speeds less than 35 miles per hour, an additional 2,430 and 1,226 MT CO<sub>2</sub>e, respectively, would be achieved, relative to the reductions presented in Table 4-1.
- d. Water efficiency improvements will reduce water consumption, which will likewise contribute to reductions in building energy use. For example, efficient faucets that use less water will require less electricity and natural gas for hot water heating. Approximately 85% (86,371 MT CO<sub>2</sub>e) of the GHG reductions achieved by WAW-1 are associated with reduced hot water heating. The remaining reductions (15,280 MT CO<sub>2</sub>e) are related to reduction in energy use required to transport, distribute, and treat water.
- e. Analysis currently included recycled water benefits from the Rimgrove and Pathfinder projects. Additional reductions are expected from other projects and activities implemented under this action prior to 2020.
- Please refer to Appendix C for additional information on the individual actions, including goals and supporting policies.
-

For actions with quantified GHG reductions, costs and savings directly associated with the implementation of each local community action were estimated and attributed to the residents and businesses within the unincorporated areas. Costs and savings associated with actions that do not currently support a quantitative analysis are assessed qualitatively. Table 4-2 summarizes the estimated costs and savings for the private sector (e.g., residents and businesses), as available. The table also summarizes the anticipated community co-benefits associated with the primary CCAP strategy areas.



#### Cost-Effectiveness Terms Explained








**Cost per MT CO<sub>2</sub>e:** Represents the net present value of each measure annualized over its lifetime, and then divided by the tons of CO<sub>2</sub>e reduction that each measure is expected to achieve in 2020. This value adjusts for the significant variation in the lifetime of individual GHG reduction measures (e.g., from energy-efficient household appliances that last 10 years to solar panels that could last up to 25 years), as well as variations in capital costs and annual cost savings.





**Simple payback period:** The simple payback period represents the estimated number of years before the initial investment is repaid. It is estimated by dividing the total initial capital cost by the annual cost savings.


**Net present value:** Net present value (NPV) gives the net value of the measure in present value terms (i.e., discounted over the lifetime of the measure). A positive NPV indicates that a measure is cost-saving over its lifetime.

Table 4-2. Summary of Costs, Savings, and Benefits Associated with Local GHG Reduction Actions

Strategy Area	Action	Cost/MT CO <sub>2e</sub>	Measure Lifetime	Simple Payback (Years)	Net Present Value	Co-Benefits		
 Green Building and Energy	BE-1	Green Building Development	-\$48 to \$38 <sup>b</sup>	20	11 to 14	-\$0.4 million to \$0.3 million <sup>b</sup>		
	BE-2	Energy Efficiency Programs	\$60 to \$215	18	4 to 10	\$33 million to \$117 million		
	BE-3	Solar Installations—Direct Purchase <sup>a</sup>	-\$105 to \$103 <sup>c</sup>	25	10 to 17	-\$132 million to \$137 million <sup>c</sup>		
		Solar Installations—PPA	-\$55 to \$39 <sup>c</sup>	25	NA	-\$72 million to \$52 million <sup>c</sup>		
	BE-4	Alternative Renewable Energy Programs	Not estimated. Costs may include upfront capital costs for construction, fixed and variable operations and maintenance costs, and financing costs. Costs may be offset by the value of the electricity generated.					
	BE-5	Wastewater Treatment Plant Biogas	Not estimated. Upfront costs to purchase and install methane capture and prime mover systems could range from approximately \$2,000/kilowatt (kW) to \$5,500/kW, with annual maintenance costs ranging from \$0.01 to \$0.03/kilowatt-hour. Savings may be associated with avoided energy costs.					
	BE-6	Energy Efficiency Retrofits of Wastewater Equipment	Not estimated. Capital costs could cover a variety of processes that can be upgraded to improve energy efficiency, such as the installation of variable frequency drives and high efficiency pumps and motors, and the use of more efficient blowers and air diffusers to reduce the energy demands of aeration systems. Savings may be associated with avoided energy costs.					
	BE-7	Landfill Biogas	Not estimated. Costs may include upfront capital costs to install methane capture technologies and associated monitoring systems on landfills, as well as ongoing operating and maintenance costs. Savings may be associated with energy generation and feed-in-tariffs.					

Strategy Area	Action	Cost/MT CO <sub>2</sub> e	Measure Lifetime	Simple Payback (Years)	Net Present Value	Co-Benefits
 Land Use and Transportation <sup>d</sup>	LUT-1	Bicycle Programs and Supporting Facilities	Upfront capital costs associated with construction of half of the first two phases of bikeways in the Bicycle Master Plan estimated at \$132 million, with annual maintenance costs equal to 10% of capital costs. Annual cost savings associated with reduced vehicle operating costs are estimated at approximately \$10 million.			  
	LUT-2	Pedestrian Network	Upfront capital costs for pedestrian improvements and traffic calming estimated at \$23–\$31 million, with annual maintenance costs equal to 10% of capital costs. Annual cost savings associated with reduced vehicle operating costs are estimated at approximately \$4.9 million.			  
	LUT-3	Transit Expansion	Not estimated.			
	LUT-4	Travel Demand Management	Not estimated.			
	LUT-5	Car-Sharing Program	Upfront costs to purchase vehicles estimated at \$5.1 million. Member fees are assumed to cover operating, maintenance, and program costs on an annual basis. Annual cost savings associated with reduced personal vehicle operating costs are estimated at approximately \$2.8 million.			
	LUT-6	Land Use Design and Density	Not estimated.			
	LUT-7	Transportation Signal Synchronization Program	The Metropolitan Transportation Authority (MTA) grants are expected to cover the costs of TSSP. Total program savings by 2020 are estimated at more than \$524 million, including savings associated with reduced driver time, vehicle wear, and fuel consumption.			
	LUT-8	Electric Vehicle Infrastructure	Upfront costs to install electric vehicle supply equipment (EVSE), estimated at \$5.3 million. Capital costs include transformers and panel upgrades for new sites as well as the equipment (e.g., conductors, connectors, plugs, and other apparatus), signage, and markings for the EVSE.			
	LUT-9	Idling Reduction Goal	Not estimated. Costs may include the cost of automatic engine shut down/start up systems, estimated at \$1,000 per system. Annual cost savings per vehicle are estimated at \$1,200, including savings associated with reduced fuel use and maintenance (e.g., oil changes, engine overhaul).			

Strategy Area	Action	Cost/MT CO <sub>2</sub> e	Measure Lifetime	Simple Payback (Years)	Net Present Value	Co-Benefits	
	LUT-10	Efficient Goods Movement	Not estimated. Costs may include planning costs, and capital costs for construction projects. Savings may include reduced costs associated with fewer vehicle miles traveled.				
	LUT-11	Sustainable Pavements Program	Not estimated. Some studies have shown that optimized pavement designs reduced net present costs by 40% to 50%.				
	LUT-12	Construction Equipment Electrification	Not estimated. Costs may include upfront costs to purchase or rent electric equipment. Savings may include the difference in operating costs. For a 170 horsepower air compressor operating 2,000 hours per year, annual cost savings of switching from diesel to electric could exceed \$30,000.				
 Water Conservation and Wastewater	WAW-1	Per Capita Water Use Reduction Goal	Not estimated. Recent studies have shown that incremental costs for upgrading to water efficient fixtures are negligible. Per-home annual savings for upgraded fixtures is estimated to exceed \$200.				
	WAW-2	Recycled Water Use, Water Supply Improvement Programs, and Storm Water Runoff	Not estimated. Costs may include planning costs, capital costs to expand the recycled water infrastructure, and annual operating and maintenance costs. Engineering cost analysis conducted for the Los Angeles Department of Water and Power (LADWP) <i>Water Recycling Master Plan</i> indicates that recycled water (without treatment) could be delivered at a cost of \$600/acre-foot (AF) to more than \$2,000/AF, depending on the area and plan. Savings accrue to commercial and residential water customers, associated with substituting freshwater with recycled water use. These customers may also incur user-end retrofit costs for installing separate plumbing for nonpotable irrigation demands.				
 Waste Reduction, Reuse, and Recycling	SW-1	Waste Diversion Goal	-\$311 to -\$512	NA	Net cost	NA	

Strategy Area	Action	Cost/MT CO <sub>2</sub> e	Measure Lifetime	Simple Payback (Years)	Net Present Value	Co-Benefits
 Land Conservation and Tree Planting	LC-1	Develop Urban Forests <sup>e</sup>	Exceeds -\$1,000	40	Net cost	Exceeds -\$70 million, not including the value of energy savings or co-benefits
	LC-2	Create New Vegetated Open Space	Not estimated. Costs may include upfront costs to purchase and plant open space, as well as ongoing costs to maintain vegetation.			
	LC-3	Promote the Sale of Locally Grown Foods and/or Products	Not estimated. Costs may include upfront and ongoing programmatic costs to organize and promote local farmers markets.			
	LC-4	Protect Conservation Areas	Not estimated. Costs may include outreach and enforcement expenses.			

Note: Costs are shown as negative numbers. Savings are shown as positive numbers. Values do not include programmatic or staff costs that may be incurred by the County or local governments.

- a. Cost analysis assumes implementation of solar PV; however, project applicants can install other solar technologies (e.g., solar thermal), as feasible, which may reduce costs, relative to standard PV systems.
- b. This range is wide because it aggregates both residential and commercial buildings. Commercial green building development is estimated to be significantly more cost-effective than residential; commercial payback periods could be as short as 4 years, while residential paybacks are estimated to exceed 20 years.
- c. This range reflects varying assumptions about the availability of solar rebates and incentives through the California Solar Initiative and project Solar Renewable Energy Certificate (SREC) values, as well as assumptions about future system costs and California market trends.
- d. Cost estimates for land use and transportation actions do not take into account savings associated with public safety improvements, including reduced accidents and emergency services (as applicable).
- e. Cost estimates for urban forestry do not take into account the savings associated with improving air quality, increase in home values, or other co-benefits.

Please refer to Appendix C for additional information on the individual actions, including goals and supporting policies.

## 4.5 Statewide GHG Reduction Measures

As discussed above, actions undertaken by the State will contribute to local GHG reductions in the unincorporated areas. For example, the RPS requires electric utility companies to increase their procurement of renewable resources by 2020. Renewable resources, such as wind and solar power, produce the same amount of energy as coal and other traditional sources, but do not emit any GHGs. By generating a greater amount of energy through renewable resources, electricity provided to the unincorporated areas will be cleaner and less GHG-intensive than if the State had not required the standard. Even though State measures do not always require local government action, emissions reductions achieved by this and other State measures will help lower GHG emissions in the unincorporated areas.

The County quantified five statewide initiatives that will contribute to community emissions reductions. The majority of emissions reductions will be achieved by statewide initiatives to improve vehicle engine efficiency and reduce the carbon intensity of transportation fuels. Additional reductions are gained from building energy efficiency standards and mandates for renewable energy generation. Specifically, Title 24 standards for new residential and non-residential buildings will require building shells and components be designed to conserve energy and water. The State's RPS will increase the amount of electricity generated by renewable resources, reducing GHG emissions from electricity consumption.

The final State action included in the CCAP will result in local GHG reductions from the California cap-and-trade program. The cap-and-trade program creates a market-based system with an overall emissions limit for electricity generation, large industrial sources, and onroad fuel combustion. While GHG reductions achieved by the cap-and-trade program are variable and influenced by market conditions, technological advancements, and other GHG legislation, the ARB currently estimates that the program will reduce statewide GHG emissions by 23 million metric tons CO<sub>2</sub>e by 2020 on top of other State actions. Local cap-and-trade benefits in the electric and onroad transportation sectors are included in the County's CCAP based on available research on anticipated changes in fuel costs and consumer responses.

Table 4-3 summarizes the State programs included in the County's CCAP, as well as anticipated GHG reductions.

**Table 4-3. Summary of Statewide Actions and Associated 2020 GHG Emissions Reductions**

<b>Statewide Action</b>		<b>2020 Emissions Reduction (MT CO<sub>2</sub>e)</b>	<b>Percent of State Reductions</b>
STATE-1	Renewables Portfolio Standard	336,466	21%
STATE-2	Title 24 Standards for Commercial and Residential Buildings (Energy Efficiency and CALGREEN)	91,039	6%
STATE-3	Pavley/Advanced Clean Cars (Vehicle Efficiency) and Low Carbon Fuel Standard for On-Road Transportation	964,781	61%
STATE-4	Low Carbon Fuel Standard for Off-Road Equipment and Vehicles	2,394	<1%
STATE-5	California Cap-and-Trade Program	176,845	11%
Total Statewide Reductions		1,571,526	100%

## Chapter 5 Implementation Program



“The challenges of global warming require a commitment, vigilance and the ability to learn and adapt quickly, yet thoughtfully, so that we continue to provide for our own needs while not undermining the ability of societies in the far corners of the world nor future generations to meet theirs.”

—California Air Resources Board



## 5.1 Introduction

This section describes the objectives, milestones, timeline, and processes for implementation of the CCAP. In general, the County will have limited responsibility for State programs, other than tracking GHG benefits. Many of the local actions will also be implemented through General Plan policies or other County ordinances. Accordingly, establishing a cohesive management approach is necessary to ensure the CCAP actions are implemented in a timely manner. The following sections summarize implementation steps for each CCAP action, potential funding options by strategy area, plans for monitoring and evaluating the CCAP, and strategies for future CCAP updates. Much of the text is broad to enable flexibility in developing future implementation policies, consistent with other County planning efforts, such as the General Plan.

## 5.2 CCAP Implementation Team

The County has designated a CCAP Implementation Team (CIT) to lead and coordinate the County's efforts on CCAP implementation, monitoring, and plan updates. The CIT will meet regularly, report directly to the County Board of Supervisors, and will comprise representatives from several County departments. The CIT representatives will work with the representatives from each of the County departments on CCAP action implementation, as well as with external agencies, and will provide guidance and support on financial, programmatic, and technical matters. The CIT will be responsible for updating and maintaining the CCAP, maintaining the CCAP implementation schedule, and identifying and pursuing financing for the CCAP actions. A major objective of the CIT will be to identify opportunities for "bundling" actions during the CCAP implementation phase. The County recognizes that "bundling" complementary actions will support the anticipated cumulative impact of the CCAP actions and create multiple additional benefits, such as cost-savings, interagency coordination, improved CCAP action outcomes, and community support.

## 5.3 Implementation of CCAP Actions

The following is a list of general implementation steps that the County will undertake to implement each CCAP local action.

**Develop implementation plans for each CCAP action:** The CCAP action lead entities identified in Table 5-1 will develop specific implementation plans for each CCAP action. These implementation plans will include specific milestones, deadlines, funding opportunities, partners, programs, and other details, as necessary, to initiate implementation of the CCAP action.

**Estimate project-specific costs:** The estimated costs/savings for the CCAP actions are provided in Chapter 4. During the implementation phase of each action, project-specific costs/savings will be prepared to provide a more accurate assessment of up-front investment needs, potential capital returns, and other financial planning metrics.

**Adopt or update ordinances and/or codes:** Some local actions require amendments to the Los Angeles County Code.

**Establish partnerships:** Some of the CCAP actions will require new program partnerships, both internal to the County and with external agencies, in order to leverage staff expertise and agency resources and to maximize funding opportunities.



**Pursue funding sources:** Funding from State and federal agencies can support the implementation of the CCAP actions. The County will pursue these (and other emerging) funding sources as a part of implementation efforts. The County will also consider internal funding sources such as facility master plan programs and capital improvement programs.

**Create monitoring/tracking processes and indicators:** All of the CCAP actions will require tracking and monitoring of program progress, particularly to identify and remedy any shortfalls in a timely manner. For each action, the County will identify monitoring and tracking procedures, as well as tracking indicators.



**Engage the community and stakeholders in CCAP action implementation:** The County will engage with and educate the public and stakeholder groups in the implementation of each CCAP action. The County will solicit input to design effective implementation programs for each CCAP action. Community engagement activities may include early and ongoing outreach to relevant stakeholder groups, providing clear and topic-specific messages on CCAP actions, soliciting feedback, holding multiple public meetings throughout each CCAP action implementation process, connecting through existing events and online media, and providing materials. During this process, the County will consider climate change risks to specific populations or within specific geographic areas of the County and determine how to address these risks during the action implementation.


Table 5-1 below lists initial implementation steps for each CCAP action. These initial implementation steps are in most cases related to the general implementation steps listed above, though specific to the particular CCAP action, and are not exhaustive. Table 5-1 also lists the County department responsible for the implementation of the particular CCAP action (“lead entity”). Upon adoption of the CCAP, County departments will be responsible for implementing the assigned CCAP actions, though private or other types of entities may be responsible for implementation of specific projects under each CCAP action. To the extent possible, supporting entities are also listed below.

Table 5-1. CCAP Implementation Steps

Strategy Area	Action	Initial Implementation Step(s)	Lead County Entity (Supporting Entity)
 Green Building and Energy	Green Building Development	<ul style="list-style-type: none"> <li>Consider funding and program options</li> <li>Initiate outreach, training, and education programs</li> </ul>	ISD (DRP)
	Energy Efficiency Programs	<ul style="list-style-type: none"> <li>Consider funding and program options to expand the County's Energy Upgrade program</li> <li>Develop energy conservation campaigns and low-interest financing options</li> <li>Identify partnerships with utilities and other entities to expand existing rebate or incentive programs</li> </ul>	ISD (DRP)
	Solar Installations	<ul style="list-style-type: none"> <li>Identify and remove regulatory or procedural barriers to producing solar energy in building and development codes, design guidelines, and zoning ordinances</li> <li>Identify partnerships with utilities and other entities to expand existing incentive programs</li> <li>Adopt the Renewable Energy Ordinance that outlines development guidelines for solar installation</li> <li>Initiate outreach and education programs</li> </ul>	DRP (ISD, DPW)
	Alternative Renewable Energy Programs	<ul style="list-style-type: none"> <li>Coordinate with the LADWP to identify potential alternative energy projects or facility types for the unincorporated areas</li> </ul>	ISD (DRP, DPW)
	Wastewater Treatment Plant Biogas	<ul style="list-style-type: none"> <li>Identify incentives for renewable biogas projects</li> <li>Identify potential renewable biogas projects</li> </ul>	All Operators of Sanitation Facilities
	Energy Efficiency Retrofits of Wastewater Equipment	<ul style="list-style-type: none"> <li>Partner with facility operators to identify equipment slated for retirement</li> <li>Develop a best management practices checklist for reducing equipment energy consumption</li> </ul>	All Operators of Sanitation Facilities
	Landfill Biogas	<ul style="list-style-type: none"> <li>Identify incentives for landfill biogas projects</li> <li>Identify partners and potential landfill biogas projects</li> </ul>	All Operators of Landfill Facilities
 Land Use and Transportation	Bicycle Programs and Supporting Facilities	<ul style="list-style-type: none"> <li>Implement select programs of the 2012 Bicycle Master Plan</li> <li>Work with transit stations/hub property owners, private property owners/developers and County facility managers on opportunities to provide end of trip facilities for bicycle riders, including showers, secure bicycle lockers, and changing spaces, as outlined in the County's Healthy Design Ordinance Plan and implement infrastructure improvements to promote bicyclist "first mile—last mile" access to and from transit station/hub origin and destination points.</li> </ul>	DPW, DPH and DRP (Other County Departments)

Strategy Area	Action	Initial Implementation Step(s)	Lead County Entity (Supporting Entity)
	Pedestrian Network	<ul style="list-style-type: none"> <li>Develop active transportation networks for Transit Oriented District plans that will promote livability.</li> <li>Provide traffic calming measures.</li> <li>Implement active transportation design policies and pedestrian improvement strategies outlined in the County's Healthy Design Ordinance.</li> <li>Plan and implement infrastructure improvements to promote pedestrian "first mile—last mile" access to and from transit station/hub origin and destination points.</li> </ul>	DPW, DPH, and DRP (ISD)
	Transit Expansion	<ul style="list-style-type: none"> <li>Collaborate with LA Metro on a program that prioritizes transit</li> <li>Plan and implement local community transit services that provide efficient connections to regional transit facilities</li> <li>Explore programs to offer discounted transit passes</li> <li>Plan and implement infrastructure improvements to promote bicycle and pedestrian "first mile—last mile" access to and from transit station/hub origin and destination points.</li> </ul>	DPW (DRP)
	Travel Demand Management	<ul style="list-style-type: none"> <li>Encourage ride-sharing programs and a permanent transportation management association membership</li> <li>Implement marketing strategies to reduce commute trips</li> <li>Encourage employer-sponsored vanpools or shuttles</li> <li>Encourage market-based bike sharing programs that support bicycle use around and between transit stations/hubs.</li> </ul>	CEO (All County Departments))
	Car-Sharing Program	<ul style="list-style-type: none"> <li>Conduct a feasibility study to identify priority residential and non-residential areas for implementation</li> <li>Explore incentives to encourage employer-based and private-car sharing programs</li> </ul>	CEO (All County Departments)
	Land Use Design and Density	<ul style="list-style-type: none"> <li>Implement the County's Transit Oriented District Program and Healthy Design Ordinance</li> </ul>	DRP (DPW)
	Transportation Signal Synchronization Program	<ul style="list-style-type: none"> <li>Continue to implement projects for signal improvements</li> <li>Identify additional funding opportunities to expand project implementation</li> </ul>	DPW
	Electric Vehicle Infrastructure	<ul style="list-style-type: none"> <li>Install EV charging infrastructure at public venues</li> <li>Identify opportunities to streamline County permitting processes for installing home and commercial EV charging</li> </ul>	ISD (DPW, DRP)
	Idling Reduction Goal	<ul style="list-style-type: none"> <li>Initiate development of an idling ordinance or policy that outlines goals for reduced equipment idling</li> <li>Develop an outreach and education program</li> </ul>	DRP (DPW, DPH)

Strategy Area	Action	Initial Implementation Step(s)	Lead County Entity (Supporting Entity)
	Efficient Goods Movement	<ul style="list-style-type: none"> <li>Coordinate with SCAG to facilitate implementation of a region-wide goods movement strategy</li> <li>Support SCAG and LA Metro on the evaluation of truck routes throughout the Count to identify and target areas for improvement</li> </ul>	DPW (DRP)
	Sustainable Pavements Program	<ul style="list-style-type: none"> <li>Identify potential projects for pavement improvements</li> <li>Identify additional funding opportunities to expand project implementation</li> <li>Investigate opportunities to use new materials that are more effective or achieve cost savings</li> <li>Investigate opportunities to use cool or porous pavements, as feasible, to reduce urban heat island effect and conserve water</li> </ul>	DPW
	Electrify Construction and Landscaping Equipment	<ul style="list-style-type: none"> <li>Develop an outreach and education program</li> <li>Identify incentives for equipment electrification</li> <li>Collaborate with regulatory agencies such as South Coast Air Quality Management District (SCAQMD) to identify potential customers</li> <li>Coordinate with SCAQMD to implement an incentive program and/or lawnmower exchange program</li> <li>Develop an outreach and education program</li> </ul>	DPW (DRP, DPR, BH)
	Per Capita Water Use Reduction Goal	<ul style="list-style-type: none"> <li>Promote strategies for water efficiency, retrofits, education, and water auditing</li> <li>Expand the County's Drought-Tolerant Landscaping Ordinance and the State's Model Water Efficiency Landscape Ordinance (MWELo) by requiring the reduction of outdoor potable water use</li> <li>Identify funding and incentive options, training and outreach programs</li> </ul>	DPW (Water Agencies, DPW, ISD)
 Water Conservation and Wastewater	Recycled Water Use, Water Supply Improvement Programs, and Storm Water Runoff	<ul style="list-style-type: none"> <li>Coordinate with water agencies to identify opportunities to expand groundwater management and begin development of groundwater management plans</li> <li>Expand the Low Impact Development (LID) stormwater catchment to more facilities, if feasible</li> <li>Identify partnership opportunities with regional entities or opportunities to expand regional programs</li> </ul>	DPW (DPR, DRP, ISD)
	Waste Diversion Goal	<ul style="list-style-type: none"> <li>Adopt a construction and building materials and demolition debris ordinance that requires 70% of waste be diverted from landfills</li> <li>Develop an outreach and education program</li> <li>Coordinate with waste service providers to develop incentives and neighborhood-level initiatives for recycling and composting</li> </ul>	DPW (DRP)
 Waste Reduction, Reuse, and Recycling			

Strategy Area	Action	Initial Implementation Step(s)	Lead County Entity (Supporting Entity)
 Land Conservation and Tree Planting	Develop Urban Forests	<ul style="list-style-type: none"> <li>Promote tree planting for residential and non-residential developments, consistent with the County's Healthy Design Ordinance</li> <li>Conduct a tree inventory to identify tree-deficient neighborhoods</li> <li>Partner with external and internal organizations to promote urban forests and volunteer events</li> </ul>	Fire (DPR, DRP)
	Create New Vegetated Open Space	<ul style="list-style-type: none"> <li>Identify restoration projects</li> <li>Consider funding and program options</li> <li>Promote community-based restoration programs</li> </ul>	Fire (DRP, DPR, DPW)
	Promote the Sale of Locally Grown Foods and/or Products	<ul style="list-style-type: none"> <li>Expand the Healthy Design Ordinance to encourage and support farmers markets at community parks</li> <li>Develop an education and outreach program</li> </ul>	DRP(AC, DRP, DPH)
	Protect Conservation Areas	<ul style="list-style-type: none"> <li>Evaluate the Oak Woodland Conservation Management Plan and consider revisions to further preserve existing oak woodland</li> <li>Inventory environmental, economic, and public benefits provided by conservation areas prioritize these conservation areas that benefit multiple end uses.</li> </ul>	DRP (DPR, DPW)
AC = Agricultural Commissioner BH = Beaches and Harbors CEO = CEO Office of Workplace Programs DRP = Department of Regional Planning DPH = Department of Public Health DPR = Department of Parks and Recreation DPW = Department of Public Works Fire = Fire Department ISD = Internal Services Department			

## 5.4 CCAP Implementation Schedule

To achieve the County's GHG reductions goal by 2020, CCAP implementation will need to be rapid after adoption (i.e., 2015 to 2016). All actions will be implemented with equal priority given the short timeframe. The County's lead agency for each action will develop a specific timeline and milestone(s) for each action based on the general schedule shown in Table 5-2, as part of the action's individual implementation plan. The schedule in Table 5-2 is preliminary and may be modified during CCAP implementation.

**Table 5-2. Preliminary CCAP Implementation Schedule**

Timeframe	CCAP Implementation Milestone
2014	CCAP adoption
2015	Implementation plans completed for each action; milestones identified
2015	Funding recommendations and applications for grants completed
2015–2017	All ordinances completed and adopted
2015, 2017, 2019, 2021	Inventory updates
2016	Partner programs in place
2020	Reductions achieved
Annually, beginning in 2015	CCAP review and update

Some actions require new ordinances or updates to existing ordinances; these will be completed in 2015. Implementation plans for each action, including identification of specific action milestones (and deadlines), will also be completed in 2015. The County will complete its funding recommendations for each action and submit any needed grant or funding applications in 2015. By 2016, the County anticipates that any public or partner programs will be in place. Inventory updates will be completed every other year, beginning in 2015, to track emissions. The County will also complete an annual CCAP review and update, as part of the *General Plan Annual Progress Report*, beginning in 2015.

## 5.5 CCAP Funding

Los Angeles County, private residents and businesses in the unincorporated areas, utilities, and other public sector agencies will incur costs to implement the CCAP actions. In some cases, despite up-front capital costs, these entities will also realize long-term savings resulting from reduced energy and maintenance costs that can help recoup these initial investments. Furthermore, there are many rebates, incentives, and grant programs available to reduce up-front capital costs and alleviate the overall project costs. Several of these funding opportunities are discussed below.

### 5.5.1 CCAP Funding at the Plan Level

Estimated costs and savings associated with many of the CCAP actions are presented in Chapter 4, along with other outcomes of the financial analysis conducted for these actions, such as costs/MT CO<sub>2</sub>e and net present value (a metric for the time value of the original investment). Table 5-3 summarizes the total CCAP (i.e., "plan-level") upfront costs, annual savings/costs, and responsible entities for all of the quantified actions in each of the CCAP strategy areas.



Table 5-3 shows that implementation of the CCAP requires considerable investment, to be shared across multiple entities and the broader community.<sup>8</sup> The County anticipates a leadership role in identifying, pursuing, and distributing relevant funding for the CCAP actions, working collaboratively with other entities in the County to ensure that the CCAP actions are funded and implemented in a timely manner. The County's overall strategies for funding the CCAP actions include the following.


- Pursue funding for actions concurrently, whenever possible, to utilize funds most efficiently.
- Leverage federal, state, and regional grants and other funding sources.
- Partner with other jurisdictions and regional entities to administer joint programs and with the private sector on action implementation.


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<sup>8</sup> Table 5-3 only presents cost data for actions that were quantified as part of the cost analysis. Please refer to Table 4-2 for a qualitative summary of expected costs for all other actions.

Table 5-3. CCAP Total Upfront Costs and Annual Savings/Costs by Strategy Area (Plan-Level)

Strategy Area	Action		Upfront Costs	Entity Incurring Upfront Costs	Annual Net Savings/Costs(-)	Entity Incurring Annual Savings/Costs
 Green Building and Energy	BE-1	Green Building Development	\$2.7 million to \$3.5 million	Building owners	\$0.2 million	Building owners, tenants
	BE-2	Energy Efficiency Programs	\$72 million to \$156 million	Building owners	\$16 million	Building owners, tenants
	BE-3	Solar Installations—Direct Purchase	\$388 million to \$658 million	Building owners	\$38 million	Building owners, tenants
		Solar Installations—Power Purchase Agreement (PPA)	NA	NA	-\$4.3 million to \$3.9 million	Building owners
 Land Use and Transportation	LUT-1	Bicycle Programs and Supporting Facilities	\$132 million	Local government; businesses adding bicycle facilities	Annual maintenance costs estimated at \$13.2 million; annual savings associated with reduced vehicle operating costs are estimated at approximately \$10 million;additional costs for bicycle purchase and maintenance not quantified.	Local government; businesses adding bicycle facilities; vehicle owners; bicyclists
	LUT-2	Pedestrian Network	\$23 million to \$31 million	Local government	Annual maintenance costs estimated at \$2.3 to \$3.1 million; annual savings associated with reduced vehicle operating costs are estimated at approximately \$4.9 million.	Local government; vehicle owners

Strategy Area	Action	Upfront Costs	Entity Incurring Upfront Costs	Annual Net Savings/Costs(-)	Entity Incurring Annual Savings/Costs	
 Waste Reduction, Reuse, and Recycling	LUT-5	Car-Sharing Program	\$5.1 million	Local government and/or program operator (depending on cost structure)	Member fees are assumed to cover operating, maintenance, and program costs on an annual basis. Annual cost savings associated with reduced personal vehicle operating costs are estimated at approximately \$2.8 million.	Program operator and members; vehicle owners
	LUT-7	Transportation Signal Synchronization Program	Costs are expected to be covered by future MTA grants of approximately \$54 million.	Costs are expected to be covered by future MTA grants	Annual savings in 2020 associated with reduced driver time, vehicle wear, and fuel consumption estimated at \$21 million. Maintenance costs not quantified.	Vehicle owners
	LUT-8	Electric Vehicle Infrastructure	\$5.3 million	Local government, or a third-party operator, depending on implementation strategy	Annual costs/savings will depend on program design features such as access fees or rate structures.	Program operator and members; vehicle owners
	LUT-9	Idling Reduction Goal	\$0.1 million	Vehicle owners	\$0.2 million	Vehicle owners
	SW-1	Waste Diversion Goal	Costs associated with recycling and diversion facilities not quantified.	LA County, waste haulers, and residents	-\$7 million to -\$12 million	LA County, waste haulers, and residents

Strategy Area	Action		Upfront Costs	Entity Incurring Upfront Costs	Annual Net Savings/Costs(-)	Entity Incurring Annual Savings/Costs
 Land Conservation and Tree Planting	LC-1	Develop Urban Forests	\$32 million to \$45 million	Local government	-\$5.4 million to -\$16.5 million in annual maintenance costs; \$0.5 million in annual energy savings; co-benefits not quantified.	Local government

Various funding options are available to finance the CCAP actions and can provide initial capital, reduce overall program costs, or support long-term initiatives. The following lists potential sources of funding for each of the strategy areas.



**Green building and energy:** Funding sources for this strategy area include utility rebates such as the California Solar Initiative and Energy Upgrade California—Los Angeles, federal tax credits for energy efficiency, energy efficient mortgages, power purchase agreements, planning grants (such as the Strategic Growth Council grants), CaliforniaFIRST, LA Property Assessed Clean Energy (PACE), private equity funding, and revolving loan funds.



**Land use and transportation:** Potential funding sources include federal transportation programs such as the Transportation Funds for Clean Air, the National Highway System Fund, Safe Routes to School, and the Congestion Mitigation and Air Quality Program; State programs such as California's Bicycle Transportation Account, Carl Moyer Program, and State Transit Assistance Funds; and local programs such as fare increases and CIP funds.



**Water conservation and wastewater:** Mechanisms for financing water conservation and wastewater programs may include water and wastewater rate increases, fixture install rate increases, private equity funds, and revolving loan funds.



**Waste reduction, reuse, and recycling:** CalRecycle grant programs are authorized, by State legislation, to assist public and private entities in the safe and effective management of the waste stream. Funds are intended to further reduce, reuse, and recycle all waste, encourage development of recycled content products and markets, protect public health and safety, and foster environmental sustainability. Incorporated cities and counties in California, as identified by the California Department of Finance, are eligible to receive funding.



**Land conservation and tree planting:** These measures will likely require funding from the County's General Fund, federal or State grants, and private funds. CalFire's Urban and Community Forest Program offers a number of grants under Propositions 40 and 84 for tree planting, tree inventories, management plans, urban forest educational efforts, and innovative urban forestry projects. For example, the "Leafing Out" program helps governments, schools, and non-profit organizations establish initial urban forestry efforts, whereas the "Green Trees for the Golden State Grant Program" provides funding for individual urban tree projects, including up to two years of initial maintenance.

## 5.5.2 Project Level Incentive Examples

Incentives and rebates can significantly improve the economics of individual projects. For example, incremental upfront costs for a new commercial building to implement Tier 1 CALGREEN measures are estimated for the CCAP at around \$79,000 (for a five-story office building of 52,900 square feet). Assuming eligibility requirements are met and incentives are available at the time of application, commercial building owners could recoup approximately 13% of that upfront cost by applying for Southern California Edison's (SCE) Savings By Design Program. This program offers a sliding scale of between \$0.10 and \$0.30/annualized kWh in incentive payments.

In another example, the analysis completed for the CCAP estimates upfront costs for improvements to reduce energy consumption by 20 percent in an existing non-residential building at \$47,000 to \$75,000 (for a 50,000 square foot building). Taken together, State and federal tax incentives, favorable financing through programs such as LA County PACE and on-bill financing from SCE, and other incentive and rebate options can cover 50% or more of total project costs (Energy Upgrade California 2013).

For residential homes, eligible homeowners can receive up to \$4,500, as well as favorable financing options, for energy efficiency upgrades through Energy Upgrade California. Upfront costs are estimated at between \$4,300 to \$9,600 to install or upgrade to energy efficient indoor lights, an electric clothes dryer, a programmable thermostat, gas water heater, energy-efficient clothes washer and refrigerator, gas furnace, air sealing, attic insulation, duct sealing, windows, central air conditioner, duct insulation, or a cool roof.

Where upfront costs are reduced through incentive funding then payback periods would be correspondingly reduced.

#### Utility Rebates

Many utility providers in the County offer subsidies and rebates for reducing your water or energy usage in your home or business. "Cash for Grass" programs provide subsidies for removing water-intensive lawns and replacing them with mulch or native plants. High-efficiency water appliances like washers, sprinkler systems, and shower heads are also offered at a discount or are eligible for rebates. Check to see what programs are available at <http://green.lacounty.gov/wps/portal/green>.

## 5.6 Evaluation and Monitoring

The County will track the CCAP's overall progress in terms of reducing GHG emissions in the unincorporated areas, as well as each CCAP action's progress and performance. The County will prepare updates to the GHG emissions inventory for the unincorporated areas on a bi-annual basis, for comparison to the 2010 inventory and to assess progress towards the 2020 reduction target. These inventory updates will be incorporated into the corresponding *General Plan Annual Progress Report*. The first inventory update will be conducted in 2015 for the 2014 inventory year and then subsequent updates will be completed for 2016, 2018, and 2020 (in the year following). These inventory updates will provide information regarding overall trends in community emissions for the unincorporated areas, but will not isolate the impact of the CCAP actions on the emissions. To do so, the County will undertake an analysis of the influence of other factors on overall emissions, such as temperature, changes in emissions factors (particularly for the power sector, whose sources may change due to drought and other conditions), employment, gross domestic product, and population.

The County will also annually track the progress of each CCAP action for GHG reductions achieved, costs/savings, and energy/water/VTM reduced, or other appropriate parameters. The lead department for implementation of each CCAP action will establish tracking parameters, a monitoring schedule, milestone criteria, and steps for remedying any shortfalls in anticipated reductions.

## 5.7 CCAP Updates and Plan Evolution

Technologies, financing, regulations/policies, and behavior relevant to the strategy areas in the CCAP are constantly changing. In addition, it is possible that CCAP actions and related efforts may be delayed or modified, risking achievement of the CCAP target. Given these factors, the County will continually monitor CCAP progress and modify the CCAP, as needed, to reflect new policies, technologies, and financing opportunities. Changes to the CCAP will be included in the County's *General Plan Annual Progress Report*. Major changes to the CCAP, such as modification of the County's reduction target or adoption of additional reduction targets, will require public notice and approval from the County's Board of Supervisors.

As the year 2020 approaches, the County will develop a target for years beyond 2020 (such as 2035 and 2050) in order to continue the County's commitment to reducing its community climate change impact. County staff will propose a target for consideration by the Board of Supervisors and will provide an assessment of the potential impact of meeting this target on the community in the unincorporated areas, as well as on the County's internal resources. The County will likely rely on analyses and programs currently under development by CARB regarding the State's programs and continuation of the AB 32 *Scoping Plan* beyond 2020. The actions included in this CCAP will help to put the County on a path to achieve more substantial reductions in the years after 2020. The County will develop a substantial update to this CCAP for the years after 2020 by December 31, 2021. The CCAP update will take effect in 2022, allowing consideration of the achievement of the CCAP 2020 target as well as the State's achievement of the AB 32 overall goal.



## Chapter 6 References

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“Climate change will affect California and the world for decades to centuries to come. It is being addressed but not easily or quickly resolved. Nevertheless, it holds the opportunity for important changes with multiple environmental and economic co-benefits”

—California Air Resources Board



- Cal-Adapt. n.d. *cal-adapt: Exploring California's Climate Change Research*. Available: <<http://cal-adapt.org/>>.
- California Air Resources Board. 2008a. *Climate Change Scoping Plan, Economic Analysis Supplement*. December. Available: <[http://www.arb.ca.gov/cc/scopingplan/document/economic\\_analysis\\_supplement.pdf](http://www.arb.ca.gov/cc/scopingplan/document/economic_analysis_supplement.pdf)>.
- California Air Resources Board. 2008b. *Climate Change Draft Scoping Plan, Public Health Analysis Supplement*. December. Available: <[http://www.arb.ca.gov/cc/scopingplan/document/executive\\_summary\\_publichealth.pdf](http://www.arb.ca.gov/cc/scopingplan/document/executive_summary_publichealth.pdf)>.
- California Air Resources Board. 2008c. *Climate Change Scoping Plan*. December. Pursuant to AB 32, the California Global Warming Solutions Act of 2006. Available: <<http://www.arb.ca.gov/cc/scopingplan/document/scopingplandocument.htm>>. Accessed: May 2013.
- California Climate Change Center. 2012. *Our Changing Climate 2012, Vulnerability & Adaptation to the Increasing Risks from Climate Change in California*. California Climate Change Center. Available: <<http://www.energy.ca.gov/2012publications/CEC-500-2012-007/CEC-500-2012-007.pdf>>.
- California Department of Water Resources. 2014. *DWR Director Welcomes Coordinated Federal Drought Aid*. Released: February 5, 2014. Available: <<http://www.water.ca.gov/news/newsreleases/2014/020514.pdf>>. Accessed: February 11, 2014.
- California Department of Public Health. n.d. *ASTHO Climate Change Population Vulnerability Screening Tool*. Prepared by the California Environmental Health Tracking Program (CEHTP). Available: <[http://www.ehib.org/projects/ehss01/Climate%20change%20vulnerability%20report\\_ASTHO.pdf](http://www.ehib.org/projects/ehss01/Climate%20change%20vulnerability%20report_ASTHO.pdf)>.
- California Department of Public Health. 2012. *Climate Action for Health: Integrating Public Health into Climate Action Planning*. February.
- Center for Climate and Energy Solutions. 2011. *The Greenhouse Effect*. Available: <<http://www.c2es.org/facts-figures/basics/greenhouse-effect>>. Accessed: May 3, 2013.
- Centers for Disease Control and Prevention. 2010. *Climate and Health Program*. Last Revised: November 29, 2010. Available: <<http://www.cdc.gov/climateandhealth/effects/default.htm>>. Accessed: June 17, 2013.
- Cook, J., Nuccitelli, D., Green, S., Richardson, M., Winkler, B., Painting, R., Way, R., Jacobs, P., and Skuce, A. 2013. *Quantifying the consensus on anthropogenic global warming in the scientific literature*. Environmental Research Letters 8(2): 024024.
- Energy Upgrade California. 2013. Los Angeles County PACE. Available: <<https://lapace.org/tax-incentives.html>>. Accessed: November 2013.
- ICLEI. 2012. Version 1.0. *Local Governments for Sustainability USA*. Available to local governments at: <http://www.icleiusa.org/tools/ghg-protocol/community-protocol/us-community-protocol-for-accounting-and-reporting-of-greenhouse-gas-emissions>.

- Intergovernmental Panel on Climate Change (IPCC). 2007a. *Climate Change 2007: The Physical Science Basis—Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*. Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K. B. Averyt, M. Tignor and H. L. Miller (eds.). Cambridge University Press. New York, NY.
- Intergovernmental Panel on Climate Change (IPCC). 2007b. *Climate Change 2007: Impacts, Adaptation and Vulnerability—Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*. M. L. Parry, O. F. Canziani, J. P. Palutikof, P. J. van der Linden and C. E. Hanson (eds.). Cambridge University Press. New York, NY.
- Maizlish, N., Woodcock, J., Co, S., Ostro, B., Fanai, A., and Fairley, D. 2011. *Health Co-Benefits and Transportation-Related Reductions in Greenhouse Gas Emissions in the Bay Area*. November.
- National Oceanic and Atmospheric Administration. 2013. *Climate at Glance*. Available: <[http://www.ncdc.noaa.gov/cag/time-series/us/tmp/ytd/04/23174/12/1945-2013?base\\_prd=true&begbaseyear=1945&endbaseyear=2012&trend=true&trend\\_base=10&begtrendyear=1945&endtrendyear=2012&filter=true](http://www.ncdc.noaa.gov/cag/time-series/us/tmp/ytd/04/23174/12/1945-2013?base_prd=true&begbaseyear=1945&endbaseyear=2012&trend=true&trend_base=10&begtrendyear=1945&endtrendyear=2012&filter=true)>. Accessed: July 9, 2013.
- Sun F., D. Walton, A. Hall. 2013. *Mid-century and end-of-century changes in temperature and heat extremes under “business-as-usual” and “mitigation” scenarios in the Los Angeles region*. In preparation.
- University of California, Los Angeles. 2012. *C-Change.LA, Climate Change in Los Angeles*. Available: <<http://c-change.la/>>.
- Urban Land Institute. 2007. *Growing Cooler: The Evidence on Urban Development and Climate Change*.
- U.S. Environmental Protection Agency. 2014. *Greenhouse Gas Equivalencies Calculator*. Last Revised: April 16, 2014. Available: <<http://www.epa.gov/cleanenergy/energy-resources/calculator.html#results>>. Accessed: May 8, 2014.

## Appendix A

# Relevant Greenhouse Gas Legislation and Regulation

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This appendix provides additional information on federal, State, and regional GHG legislation applicable to the County's efforts to reduce GHG emissions and implement the CCAP.

## Federal Regulation

Although there is currently no overarching federal law specifically related to climate change or the reduction of GHGs, regulation of key sources under the federal Clean Air Act (CAA) is underway with the U.S. Environmental Protection Agency (US EPA) in a lead role. Although periodically debated in Congress, no federal legislation concerning GHG limitations is likely in the foreseeable future and the current administration is presently only focused on executive branch action using existing authorities.

Figure 1 displays a timeline of key State and federal regulatory activity.

## Massachusetts, et al. vs. U.S. Environmental Protection Agency (2007)

Twelve U.S. states and cities, including California, in conjunction with several environmental organizations, sued to force EPA to regulate GHGs as a pollutant pursuant to the CAA in *Massachusetts, et al. v. Environmental Protection Agency*, 549 US 497 (2007). The court ruled that the plaintiffs had standing to sue, GHGs fit within the CAA's definition of a pollutant, and the EPA's reasons for not regulating GHGs were insufficiently grounded in the CAA. This ruling allowed the regulation of GHGs under the CAA by the EPA.

## United States Environmental Protection Agency Endangerment Finding (2009)

In its "Endangerment Finding," the EPA Administrator found that GHGs in the atmosphere threaten the public health and welfare of current and future generations. The Administrator also found that the combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution that threatens public health and welfare. Although the Finding of Endangerment does not place requirements on industry, it is an important step in EPA's process to develop regulation. This measure was a prerequisite to finalizing EPA's proposed GHG emission standards for light-duty vehicles.

## United States Environmental Protection Agency Mandatory Reporting Rule for Greenhouse Gas (2009)

Under the Mandatory Reporting Rule, suppliers of fossil fuels, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons of CO<sub>2</sub>e or more per year of GHGs are required to report annual emissions to the EPA. The mandatory reporting rule does not limit GHG emissions but establishes a standard framework for emissions reporting and tracking of large emitters (U.S. Environmental Protection Agency 2010).

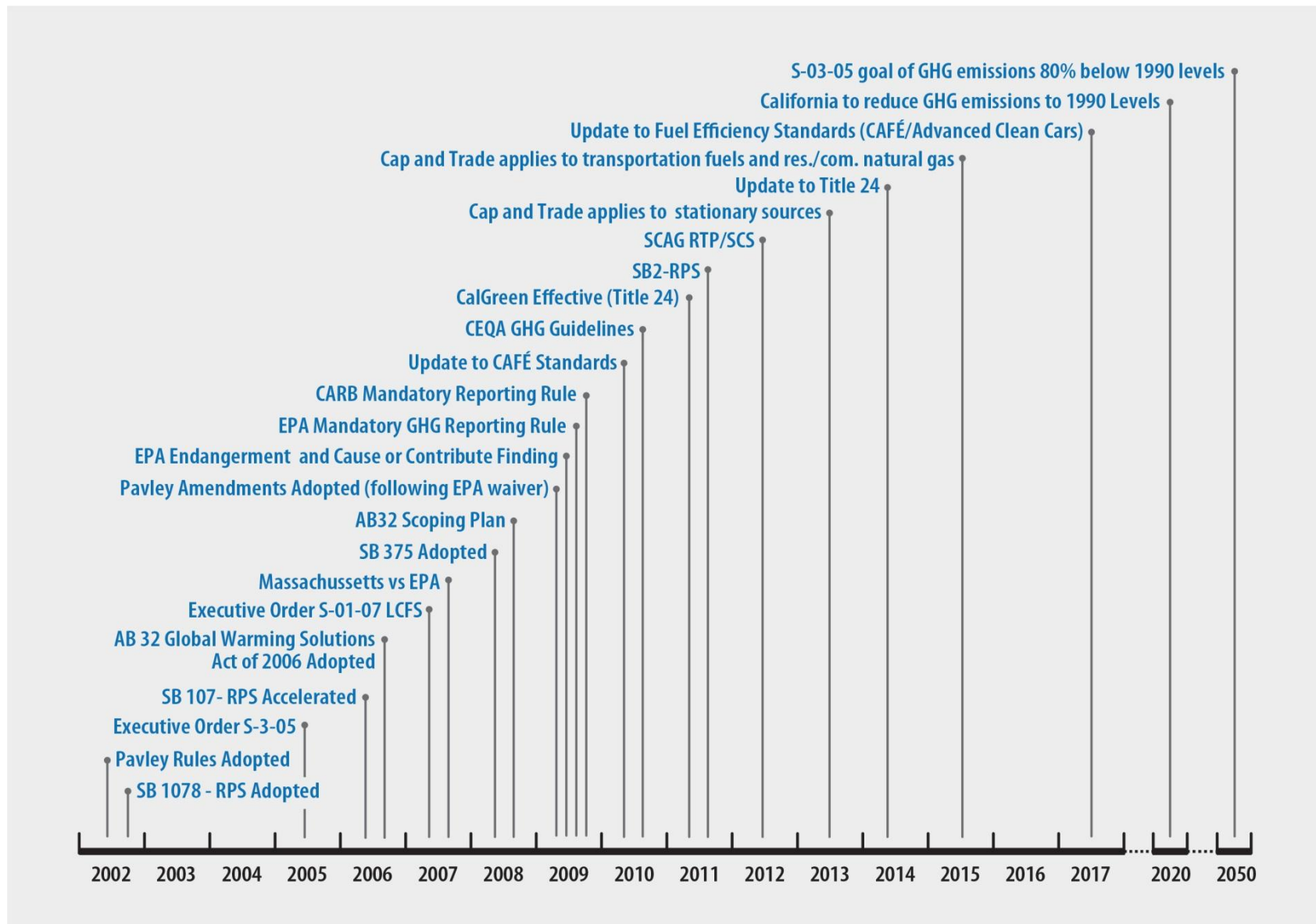


Figure 1. Key Milestones in Federal and State Climate Legislation

## U.S. Environmental Protection Agency Cause or Contribute Finding (2010)

In its “Cause or Contribute Finding,” the EPA Administrator found that the combined emissions of GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution that threatens public health and welfare (U.S. Environmental Protection Agency 2010).

## Update to Corporate Average Fuel Economy Standards (2010/2012)

The current Corporate Average Fuel Economy (CAFE) standards (for model years 2011 to 2016) incorporate stricter fuel economy requirements promulgated by the federal government and California into one uniform standard. Additionally, automakers are required to cut GHG emissions in new vehicles by roughly 25% by 2016 (resulting in a fleet average of 35.5 miles per gallon [mpg] by 2016). Rulemaking to adopt these new standards was completed in 2010. California agreed to allow automakers who show compliance with the national program to also be deemed in compliance with State requirements. The federal government issued new standards in 2012 for model years 2017–2025, which will require a fleet average of 54.5 mpg in 2025.

## EPA Regulation of Stationary Sources Under the Clean Air Act (Ongoing)

Pursuant to its authority under the CAA, the EPA has been developing regulations for new stationary sources such as power plants, refineries, and other large sources of emissions. Pursuant to the President’s 2013 Climate Action Plan, the EPA will be directed to also develop regulations for existing stationary sources.

## State Legislation

California has adopted statewide legislation addressing various aspects of climate change and GHG emissions mitigation. Much of this legislation is not directed at citizens or jurisdictions specifically, but rather establishes a broad framework for the State’s long-term GHG reduction and climate change adaptation program. Former Governor Schwarzenegger and current Governor Brown have also issued several executive orders related to the State’s evolving climate change policy. Of particular importance to local governments is the direction provided by the AB 32 *Scoping Plan*, which recommends local governments reduce their GHG emissions by a level consistent with State goals.

Summaries of key regulations and legislation at the State level are provided below. Figure 1 displays a timeline of key State and federal regulatory activity.

## Assembly Bill 1493—Pavley Rules (2002, Amendments 2009, 2012 Rule-Making)

Known as “Pavley I,” AB 1493 standards were the nation’s first GHG standards for automobiles. AB 1493 requires the California Air Resources Board (CARB) to adopt vehicle standards that will lower GHG emissions from new light-duty autos to the maximum extent feasible beginning in 2009.

Additional strengthening of the Pavley standards (referred to previously as “Pavley II”, now referred to as the “Advanced Clean Cars” initiative) has been proposed for vehicle model years 2017–2025. Together, the two standards are expected to increase average fuel economy to roughly 43 miles per gallon by 2020 and reduce GHG emissions from the transportation sector in California by approximately 14%. In June 2009, the EPA granted California’s waiver request enabling the State to enforce its GHG emissions standards for new motor vehicles beginning with the current model year.

EPA and CARB have worked together on a joint rulemaking to establish GHG emissions standards for model-year 2017–2025 passenger vehicles. As noted above, the federal government completed rulemaking in 2012 that resulted in adoption of new standards that would lead to fleet average of 54.5 mpg in 2025. Also in 2012, CARB strengthened its Zero Emission Vehicle (ZEV) program to require 15% of automakers’ annual new vehicle sales in California to be ZEV or transitional-ZEV by 2025.<sup>1</sup>

## **Senate Bills 1078 (2002)/107 (2006) and Senate Bill 2 (2011)—Renewables Portfolio Standard**

Senate Bills (SB) 1078 (2002) and 107 (2006), Renewables Portfolio Standard (RPS), required investor-owned utilities (IOUs), energy service providers (ESPs), and Community Choice Aggregations (CCAs) to procure 20% of retail sales in 2010 from eligible renewable sources. The California Public Utilities Commission (CPUC) and CEC are jointly responsible for implementing the program. Senate Bill 2 (2011) set forth a longer range target of procuring 33% of retail sales by 2020.

## **Executive Order S-03-05 (2005)**

EO S-03-05 established the following GHG emission reduction targets for California’s State agencies.

- By 2010, reduce GHG emissions to 2000 levels.
- By 2020, reduce GHG emissions to 1990 levels.
- By 2050, reduce GHG emissions to 80% below 1990 levels.

Executive orders are binding only on State agencies. Accordingly, EO S-03-05 guides State agencies’ efforts to control and regulate GHG emissions but will have no direct binding effect on local government or private actions. The Secretary of the California Environmental Protection Agency (CalEPA) is required to report to the Governor and State legislature biannually on the impacts of global warming on California, mitigation and adaptation plans, and progress made toward reducing GHG emissions to meet the targets established in this executive order.

## **Assembly Bill 32—California Global Warming Solutions Act (2006)**

AB 32 codified the State’s GHG emissions target by requiring that the State’s global warming emissions be reduced to 1990 levels by 2020. Since being adopted, CARB, CEC, CPUC, and the Building Standards Commission have adopted regulations that will help meet the goals of AB 32.

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<sup>1</sup> These categories include all-battery electric vehicles, plug-in hybrid electric vehicles, hydrogen fuel cell vehicles, and hydrogen internal combustion vehicles.

The AB 32 *Scoping Plan* establishes a framework for achieving statewide GHG reductions required by AB 32 to reduce GHG emissions to 1990 levels by 2020. The *Scoping Plan* describes a list of measures that the State will undertake, and the anticipated GHG reductions associated with these measures. It requires CARB and other State agencies to develop and enforce regulations and other initiatives for reducing GHGs. Because the State does not have jurisdictional control over all of the activities that produce GHG emissions in California, the AB 32 *Scoping Plan* articulates a unique role for local governments in achieving the State's GHG reduction goals. The AB 32 *Scoping Plan* recommends that local governments establish GHG reduction goals for both their municipal operations and the community at large that are consistent with those of the State. Many jurisdictions across California, including several cities in LA County, have completed a CAP.

CARB is presently completing an update to the AB 32 *Scoping Plan*, which is expected to be adopted in late 2013.

## **Executive Order S-01-07—Low Carbon Fuel Standard (2007)**

EO S-01-07 mandates: (1) that a statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10% by 2020; and (2) that a Low Carbon Fuel Standard (LCFS) for transportation fuels be established in California.<sup>2</sup>

## **Senate Bill 375—Sustainable Communities Strategy (2008)**

SB 375 provides for a new planning process that coordinates land use planning, regional transportation plans, and funding priorities in order to help California meet the GHG reduction goals established in AB 32. SB 375 requires metropolitan planning organizations (MPOs) to incorporate a "sustainable communities strategy" (SCS) in their Regional Transportation Plans (RTPs). The goal of the SCS is to reduce regional vehicle miles traveled (VMT) through land use planning and related transportation patterns. The regional targets were released by CARB in September 2010. SB 375 also includes provisions for streamlined California Environmental Quality Act (CEQA) review for some infill projects, such as transit-oriented development. The regional GHG reduction target for Southern California Association of Governments (SCAG) is an 8% per capita GHG reduction by 2020 and a conditional goal of 13% by 2035. SCAG adopted the regional RTP/SCS on April 4, 2012 (Southern California Association of Governments 2012).

## **California Energy Efficiency Standards for Residential and Non-Residential Buildings—Title 24 (2008), Green Building Code (2011), Title 24 Update (2014)**

California has adopted aggressive energy efficiency standards for new buildings and has been continually updating them for many years. In 2008, the California Building Standards Commission adopted the nation's first green building standards, which include standards for many other aspects of the built environment besides energy efficiency. The California Green Building Standards Code

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<sup>2</sup> The CARB approved the LCFS on April 23, 2009 and the regulation became effective on January 12, 2010 (California Air Resources Board 2011). The U.S. District Court for the Eastern District of California ruled in December 2011 that the LCFS violates the Commerce Clause of the U.S. Constitution. The CARB appealed this ruling in 2012 and on September 18, 2013, a 9<sup>th</sup> U.S. Circuit Court of Appeals panel upheld the LCFS, ruling that the program does not violate the Commerce Clause, and remanded the case to the Eastern District.

(proposed Part 11, Title 24) was adopted as part of the California Building Standards Code (24 California Code of Regulations [CCR]). Part 11 establishes voluntary standards that became mandatory in the 2010 edition of the code, including planning and design for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants. The voluntary standards took effect on January 1, 2011. The next update of the Title 24 energy efficiency standards was adopted in 2012 and will take effect in 2014.

## **California Air Resources Board Greenhouse Gas Mandatory Reporting Rule Title 17 (2009)**

In December of 2007, CARB approved a rule requiring mandatory reporting of GHG emissions from certain sources, pursuant to AB 32. Facilities subject to the mandatory reporting rule must report their emissions from the calendar year 2009 and have those emissions verified by a third party in 2010. In general, the rule applies to facilities emitting more than 25,000 MT CO<sub>2</sub>e in any given calendar year or electricity generating facilities with a nameplate generating capacity greater than 1 megawatt (MW) and/or emitting more than 25,000 MT CO<sub>2</sub>e per year. Additional requirements also apply to cement plants and entities that buy and sell electricity in the State.

## **State CEQA Guidelines Update (2010)**

The State CEQA Guidelines require lead agencies to describe, calculate, or estimate the amount of GHG emissions that would result from a project. Moreover, the State CEQA Guidelines emphasize the need to determine potential climate change effects of the project and propose mitigation as necessary. The State CEQA Guidelines confirm the discretion of lead agencies to determine appropriate significance thresholds, but require the preparation of an environmental impact report (EIR) if “there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with adopted regulations or requirements” (Section 15064.4).

The guidelines were updated in 2010 to address GHG emissions. State CEQA Guidelines section 15126.4 includes considerations for lead agencies related to feasible mitigation measures to reduce GHG emissions, which may include measures in an existing plan or mitigation program for the reduction of emissions that are required as part of the lead agency’s decision; implementation of project features, project design, or other measures that are incorporated into the project to substantially reduce energy consumption or GHG emissions; offsite measures, including offsets that are not otherwise required, to mitigate a project’s emissions; and, measures that sequester carbon or carbon-equivalent emissions.

## **Greenhouse Gas Cap-and-Trade Program (2013)**

On October 20, 2011, CARB adopted the final cap-and-trade program for California. The California cap-and-trade program will create a market-based system with an overall emissions limit for affected sectors. The program is currently proposed to regulate more than 85% of California’s emissions and will stagger compliance requirements according to the following schedule: (1) electricity generation and large industrial sources (2013); (2) fuel combustion and transportation (2015). The first auction occurred in late 2012 with the first compliance year in 2013.

## Regional Regulation

### South Coast Air Quality Management District

The AB 32 *Scoping Plan* does not provide an explicit role for local air districts with respect to implementing AB 32, but it does state that CARB will work actively with air districts in coordinating emissions reporting, encouraging and coordinating GHG reductions, and providing technical assistance in quantifying reductions. The ability of air districts to control GHG emissions is provided primarily through permitting, as well as through their role as a CEQA lead or commenting agency, the establishment of CEQA thresholds, and the development of analytical requirements for CEQA documents.

To provide guidance to local lead agencies for determining the significance of GHG emissions in their CEQA documents, an SCAQMD staff working group has been evaluating potential GHG CEQA significance thresholds (South Coast Air Quality Management District 2012). Members of the working group include government agencies that are implementing CEQA and representatives from various stakeholder groups that provide input to the SCAQMD staff on developing GHG CEQA significance thresholds.

On December 5, 2008, the SCAQMD Governing Board adopted the staff proposal for an interim GHG significance threshold of 10,000 metric tons per year for industrial permitting projects where SCAQMD is lead agency (South Coast Air Quality Management District 2008). The board letter, resolution, interim GHG significance threshold, draft guidance document, and attachments can be found under Board Agenda Item 31 on the December 5, 2008, Governing Board meeting agenda. While the working group has evaluated potential thresholds for residential, commercial, and mixed-use projects, it has neither proposed nor adopted them.

### Southern California Association of Governments

SCAG is the federally designated MPO for the majority of the Southern California region, including Los Angeles County. SCAG develops regional plans for transportation, growth management, hazardous waste management, housing, and air quality. SCAG's *Compass Blueprint Growth Visioning* effort and *Two Percent Strategy* encourage concentrating regional growth, consisting of mixed-use and walkable communities with ample open space, in existing and emerging centers along transportation corridors and in transit centers. The *2012 Regional Transportation Plan/Sustainable Communities Strategy* outlines SCAG's plan for integrating transportation and land use planning in response to projected growth, housing needs, changing demographics, and transportation demands in compliance with the GHG emissions-reduction goals set forth by CARB per SB 375 (see above).

## References

- California Air Resources Board. 2008. *Climate Change Scoping Plan*. December. Available: <<http://www.arb.ca.gov/cc/scopingplan/document/scopingplandocument.htm>>. Accessed: May 18, 2011.
- . 2012. *The Zero Emission (ZEV) Regulation*. January. Available: [http://www.arb.ca.gov/msprog/zevprog/factsheets/general\\_zev\\_2\\_2012.pdf](http://www.arb.ca.gov/msprog/zevprog/factsheets/general_zev_2_2012.pdf). Accessed: August 15, 2013.
- South Coast Air Quality Management District. 2008. Board Meeting Date: December 5, 2008 Agenda No. 31. Available: <<http://www.aqmd.gov/hb/2008/December/081231a.htm>>. Accessed: July 25, 2013.
- South Coast Air Quality Management District. 2012. *Greenhouse Gas (GHG) CEQA Significance Thresholds*. Last Revised: January 12, 2012. Available: <<http://www.aqmd.gov/ceqa/handbook/GHG/GHG.html>>. Accessed: July 25, 2013.
- Southern California Association of Governments. 2012. *2012–2035 Regional Transportation Plan/Sustainable Communities Strategy*. April.
- U.S. Environmental Protection Agency. 2010. *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2008*. Available: <<http://www.epa.gov/climatechange/emissions/usinventoryreport.html>>. Accessed: May 18, 2011.

## **Appendix B**

### **Inventory and Forecast Details**

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**FINAL**

# **UNINCORPORATED LOS ANGELES COUNTY 2010 COMMUNITY GREENHOUSE GAS INVENTORY AND FORECASTS**

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# Contents

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List of Tables .....	iii
List of Figures.....	iv
List of Acronyms and Abbreviations.....	v
	<b>Page</b>
<b>Executive Summary.....</b>	<b>ES-1</b>
Introduction.....	ES-1
Report Purpose.....	ES-1
Unincorporated County Community Greenhouse Gas Emissions.....	ES-2
Emissions Inventory (2010).....	ES-3
2020 and 2035 Emissions Forecasts .....	ES-6
GHG Monitoring .....	ES-8
Report Organization .....	ES-9
<b>Chapter 1 Background Information.....</b>	<b>1-1</b>
County Overview .....	1-1
Socioeconomic Data and Growth Forecasts .....	1-3
Report Definitions and Terminology .....	1-3
The Science of Climate Change .....	1-5
Global Warming .....	1-5
Principal Greenhouse Gases .....	1-6
Greenhouse Gas Inventories and Emissions Sources .....	1-7
Global, National, and Statewide GHG Inventories.....	1-8
<b>Chapter 2 Inventory and Forecast Results by Emissions Sector .....</b>	<b>2-1</b>
Building Energy Use.....	2-1
Stationary Sources.....	2-1
On-Road Transportation.....	2-2
Off-Road Transportation and Activity .....	2-4
Solid Waste.....	2-5
Wastewater Treatment .....	2-5
Water Conveyance .....	2-6
Agriculture .....	2-7
Sectors Presented for Informational Purposes .....	2-7
Water Supply, Treatment, and Distribution .....	2-7
Urban and Natural Forests.....	2-8

<b>Chapter 3 Methodology .....</b>	<b>3-1</b>
Quantification Protocols.....	3-1
Emissions Sectors Included in the Analysis .....	3-2
2020 and 2035 Adjusted Forecast.....	3-4
Emission Factors.....	3-5
<b>Chapter 4 Recommendations for Future Inventories .....</b>	<b>4-1</b>
Quality and Availability of Activity Data .....	4-1
Exclusion of the Coastal Islands Planning Area .....	4-1
Limitations and Recommendations for Included Emissions Sectors.....	4-2
Building Energy Use .....	4-2
On-Road Transportation .....	4-3
Off-Road Transportation and Activity.....	4-3
Agriculture .....	4-4
Solid Waste .....	4-5
Wastewater Treatment.....	4-6
Water Conveyance.....	4-7
Stationary Sources .....	4-8
Limitations and Recommendations for Emissions Sectors Included for Informational Purposes .....	4-8
Water Supply, Treatment, and Distribution .....	4-8
Urban and Natural Forests.....	4-9
<b>Chapter 5 References .....</b>	<b>5-1</b>
Personal Communications .....	5-3

# Tables

		Page
ES-1	2010 GHG Inventory for Unincorporated LA County by Sector.....	ES-4
ES-2	2020 and 2035 Adjusted GHG Emissions Forecasts for Unincorporated LA County by Sector.....	ES-7
1-1	2010, 2020, and 2035 Population, Housing, and Employment Statistics for Unincorporated LA County .....	1-4
1-2	Lifetimes and Global Warming Potentials of Several Greenhouse Gases .....	1-6
1-3	Global, National, State, and Local GHG Emissions Inventories .....	1-8
2-1	Building Energy GHG Emissions for Unincorporated LA County: 2010 Inventory and 2020 and 2035 Adjusted Forecast.....	2-1
2-2	Stationary Source GHG Emissions for Unincorporated LA County: 2010 Inventory and 2020 and 2035 Adjusted Forecast.....	2-2
2-3	Light/Medium-Duty Annual VMT and GHG Emissions for Unincorporated LA County.....	2-3
2-4	Total On Road Transportation GHG Emissions for Unincorporated LA County: 2010 Inventory and 2020 and 2035 Adjusted Forecast.....	2-4
2-5	Unincorporated LA County Off-Road Emissions by Equipment Type.....	2-4
2-6	Off-Road GHG Emissions for Unincorporated LA County: 2010 Inventory and 2020 and 2035 Adjusted Forecast .....	2-5
2-7	Solid Waste GHG Emissions for Unincorporated LA County: 2010 Inventory and 2020 and 2035 Adjusted Forecast .....	2-5
2-8	Wastewater Treatment GHG Emissions for Unincorporated LA County: 2010 Inventory and 2020 and 2035 Adjusted Forecast.....	2-6
2-9	Water Treatment and Conveyance GHG Emissions for Unincorporated LA County: 2010 Inventory and 2020 and 2035 Adjusted Forecast .....	2-6
2-10	Agriculture GHG Emissions for Unincorporated LA County: 2010 Inventory and 2020 and 2035 Adjusted Forecast .....	2-7
2-11	Water Supply, Treatment, and Distribution: 2010 Inventory and 2020 and 2035 Adjusted Forecast .....	2-8
2-12	Sequestered Carbon Dioxide from Unincorporated Urban and Natural Forests: 2010 Inventory and 2020 and 2035 Adjusted Forecast .....	2-9
3-1	Unincorporated County Inventory 2020 and 2035 Forecast Methodology .....	3-4
3-2	Greenhouse Gas Emission Factors.....	3-5

## Figures

---

	<b>Page</b>
ES-1      2010 GHG Inventory for Unincorporated LA County by Sector .....	ES-5
1-1      LA County Planning Areas .....	1-2

## Acronyms and Abbreviations

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AB	Assembly Bill
AB 32	Assembly Bill 32
AEP	Association of Environmental Professionals
AVAQMD	Antelope Valley Air Quality Management District
BAU	business-as-usual
BOD5 load	biochemical oxygen demand of wastewater during decomposition occurring over a 5-day period
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCAP	community climate action plan
CEC	California Energy Commission
CH <sub>4</sub>	methane
CO <sub>2</sub>	carbon dioxide
CO <sub>2</sub> e	carbon dioxide equivalent
CPUC	California Public Utilities Commission
DPW	Department of Public Works
EPA	U.S. Environmental Protection Agency
F	Fahrenheit
FOD	first order of decay
GHG	greenhouse gas
GIS	geographic information system
GSE	ground support equipment
GWP	global warming potential
HFCs	hydrofluorocarbons
ICF	ICF International
IPCC	Intergovernmental Panel on Climate Change
kWh	kilowatt-hour
LA	Los Angeles
LA County	Los Angeles County
LARC	Los Angeles Regional Collaborative
LAWA	Los Angeles World Airports
LGOP	Local Government Operations Protocol

LMOP	Landfill Methane Outreach Program
MT	metric tons
N <sub>2</sub> O	nitrous oxide
NAICS	North American Industry Classification System
NASS	U.S. Department of Agriculture's National Agricultural Statistics Service
ODS	ozone-depleting substances
Office of Sustainability	Los Angeles County Office of Sustainability
PFCs	perfluorinated carbons
Ppb	parts per billion
Ppm	parts per million
Ppt	parts per trillion
RTAC	Regional Targets Advisory Committee
RTP	Regional Transportation Plan
SCAG	Southern California Associations of Governments
SCAQMD	South Coast Air Quality Management District
SCS	Sustainable Communities Strategies
SEEC	Statewide Energy Efficiency Collaborative
SF <sub>6</sub>	sulfur hexafluoride
SONGS	San Onofre Nuclear Generation Station
SWIMS	Solid Waste Information Management System
U.S.	United States
USFS	U.S. Forest Service
UWMPs	Urban Water Management Plans
VMT	vehicle miles travelled
WWTP	wastewater treatment plant

## Introduction

Climate change has emerged as an important issue at the global, national, state, and local levels. Recognizing the need for early and coordinated statewide action, the California legislature passed Assembly Bill (AB) 32, the Global Warming Solutions Act, in March 2006. AB 32 established a statewide goal to reduce greenhouse gas (GHG) emissions back to 1990 levels by 2020. This goal was developed as a near-term target in anticipation of future reduction efforts. Best available scientific data indicate that additional global action will be required after 2020 to avoid the most severe climate change effects.

The California Air Resources Board (CARB) adopted the AB 32 *Scoping Plan* as a framework for achieving the AB 32 goals in 2008. The AB 32 *Scoping Plan* outlines a series of technologically feasible and cost-effective measures to reduce statewide GHG emissions. The AB 32 *Scoping Plan* also recognizes that local governments, as opposed to the State, often have jurisdiction over activities that produce GHG emissions in California. Accordingly, the AB 32 *Scoping Plan* articulates a unique role for local governments in achieving the State's GHG reduction goals.

Los Angeles County (LA County) is acutely aware of the County's role in helping California achieve the AB 32 reduction goals. The unincorporated areas of LA County comprise more than 2,600 square miles and are home to over one million residents (2010 est.) (Los Angeles County 2012). These areas are economically and socially diverse, which presents unique challenges and opportunities for robust climate action planning. To better understand GHG emissions sources and their relative importance, the County prepared the following GHG inventories and estimates for community activities within the unincorporated County.

- Inventory of 2010 GHG emissions (2010 inventory)
- Estimated 2020 GHG emissions (2020 forecast)
- Estimated 2035 GHG emissions (2035 forecast)

This report summarizes the results of the 2010 inventory and 2020 and 2035 forecasts for unincorporated LA County.

## Report Purpose

The County identified three primary objectives in preparing this report. First, the report includes an inventory of all GHG emissions that resulted from community activities within unincorporated LA County in 2010 (inventory year). The inventory also serves as a starting point for future year emissions projections, and eventually will be a foundation for climate action planning efforts.

Second, the report provides an estimate of future GHG emissions from community activities in 2020 and 2035. The emissions estimates do not take into account the majority of future GHG reduction efforts, but are forecast based on projected growth in socioeconomic and other factors for the unincorporated County. These forecasts are considered "adjusted" because they are based on the growth assumptions included in Southern California Association of Governments' (SCAG's) 2035

*Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)*, which are more closely aligned to the data and assumptions used to generate the *draft* General Plan build-out scenario for the General Plan Update than the *existing* General Plan build-out (i.e., the “business-as-usual” [BAU] condition). The *draft* General Plan accommodates new housing and jobs within the unincorporated area in anticipation of population growth in the County and the region. Major policies of the *draft* General Plan include encouraging walking, bicycling, and transit use; encouraging high densities and promoting mixed use; and protecting valuable habitats, employment districts, and agricultural areas.

The vehicle miles travelled (VMT) data used to forecast transportation emissions to 2020 and 2035 also account for all future planned highway and transit network improvements outlined in SCAG’s 2035 RTP/SCS project list (Southern California Association of Governments 2012; Yoon pers. comm.). Although the forecasts do not represent “pure” BAU conditions, they do not account for additional State and local land use and transportation measures that may be implemented after 2010 and therefore represent a starting point for emissions reductions. Likewise, the projections can be used to develop future year emissions reduction targets.

Third, the report provides background information on the methods used to quantify the GHG inventory and adjusted emissions forecasts. Properly understanding the data, techniques, assumptions, and limitations is important for future climate action planning efforts. As the County takes steps to reduce GHG emissions within unincorporated areas, updating the emissions inventory and forecasts will be critical for tracking progress and success. Utilizing consistent methods will be important for ensuring accuracy and enabling comparisons.

## Unincorporated County Community Greenhouse Gas Emissions

GHG emissions from “community activities” include those occurring due to activities within the jurisdictional boundaries of unincorporated LA County, including some emissions that occur outside of the unincorporated County that are related to activities inside the County. This inventory focuses on community emissions most readily under the control or subject to the influence of the County. For direct emissions (such as natural gas combustion in buildings), if the County can have a substantial effect on those emissions by influencing energy use (such as through green building codes), then the direct emissions are included in the inventory. For indirect emissions (such as solid waste disposed outside of the County), if the County can have a substantial effect on those indirect emissions by influencing demand (such as waste minimization and diversion programs), then they are included in the inventory. By including emissions that are controlled by or subject to the influence of the County, the inventory can form the basis for local climate action planning.

Emissions generated by all jurisdictions within LA County are encapsulated in a separate effort led by the Los Angeles Regional Collaborative (LARC) for Climate Action and Sustainability that will be released separately by the LARC. GHG emissions associated with the County’s municipal operations are currently undergoing separate evaluation and reduction planning efforts.

As noted above, the County inventoried GHG emissions generated by community activities in 2010 and forecasted those emissions to 2020 and 2035. The analysis utilized methodologies and procedures used by federal, state, and local air quality management agencies, as well as those commonly used in developing greenhouse gas emissions for local jurisdictions. The 2010 emissions

inventory represents the “existing” emissions level for the community climate action plan (CCAP). The 2020 and 2035 emissions projections are predictions of how community emissions may change in the absence of State and local actions to reduce GHGs. The forecasts are based on expected growth in unincorporated County population, employment, and housing.

The GHG inventory and emissions forecasts are presented in metric tons (MT) of carbon dioxide equivalent (CO<sub>2</sub>e). Presenting inventories in CO<sub>2</sub>e allows one to characterize the complex mixture of GHGs as a single unit and accounts for the unique global warming potential (GWP) of each gas. Emissions results are provided for the entire unincorporated County.

## Emissions Inventory (2010)

Table ES-1 and Figure ES-1 summarize total GHG emissions for unincorporated LA County by emissions source. Emissions included in the inventory are direct emissions, such as the combustion of natural gas for heating, and indirect emissions, such as the GHG emissions from electricity generation, which typically occur outside the inventory area but are influenced by electricity consumption within the County.

Electricity emissions from water supply, treatment, and distribution are not presented separately from other emission sources in the inventory because they are already included in the building energy sector under “Commercial/Industrial Electricity.” However, these emissions are disclosed as an individual line item for informational purposes. Unlike traditional emissions sources, urban and natural forests are considered emissions sinks because they naturally remove CO<sub>2</sub> from the atmosphere. Natural forests are part of the natural carbon cycle, and thus it is inappropriate to count them as an “offset” against anthropogenic emissions sources. The ICLEI U.S. Community Protocol (ICLEI 2012) recommends that carbon sequestration not be added to inventories of anthropogenic emissions but disclosed separately, which is what this inventory does. Accordingly, urban and natural forests are disclosed in this inventory but are not combined with the anthropogenic emissions in GHG inventory. Expansion of urban and natural forests is sometimes quantified as part of local climate action planning, but that quantification would apply to planned new forested areas, as opposed to existing ones. Finally, in some cases, urban and natural forests within a jurisdiction may not be under the control of the County, such as in the case of a regional or national park.

**Table ES-1. 2010 GHG Inventory for Unincorporated LA County by Sector (MT CO<sub>2</sub>e)**

Emissions Sector	2010 Emissions	Percent of Inventory
Included Emissions		
Residential Natural Gas	678,438	8.5%
Residential Electricity	586,515	7.3%
Commercial/Industrial Natural Gas	246,954	3.1%
Commercial/Industrial Electricity	2,394,306	30.0%
Large Industrial Sources	219	0.0%
Small Industrial Sources	1,064	0.0%
On-Road Transportation	3,359,231	42.1%
Off-Road Transportation and Equipment	24,480	0.3%
Solid Waste	535,148	6.7%
Wastewater Treatment	29,885	0.4%
Water Conveyance	96,189	1.2%
Agriculture	30,290	0.4%
<i>Total Emissions <sup>a</sup></i>	<i>7,982,720</i>	<i>100.0%</i>
Emissions for Informational Purposes <sup>b</sup>		
Water Supply, Treatment, and Distribution <sup>c</sup>	40,406	-
Urban and Natural Forests Sequestration <sup>d</sup>	-48,312	-
National and State Forests Sequestration <sup>e</sup>	-896,380	-
<i>Total Informational Emissions <sup>a</sup></i>	<i>-904,286</i>	<i>-</i>

**Notes:**

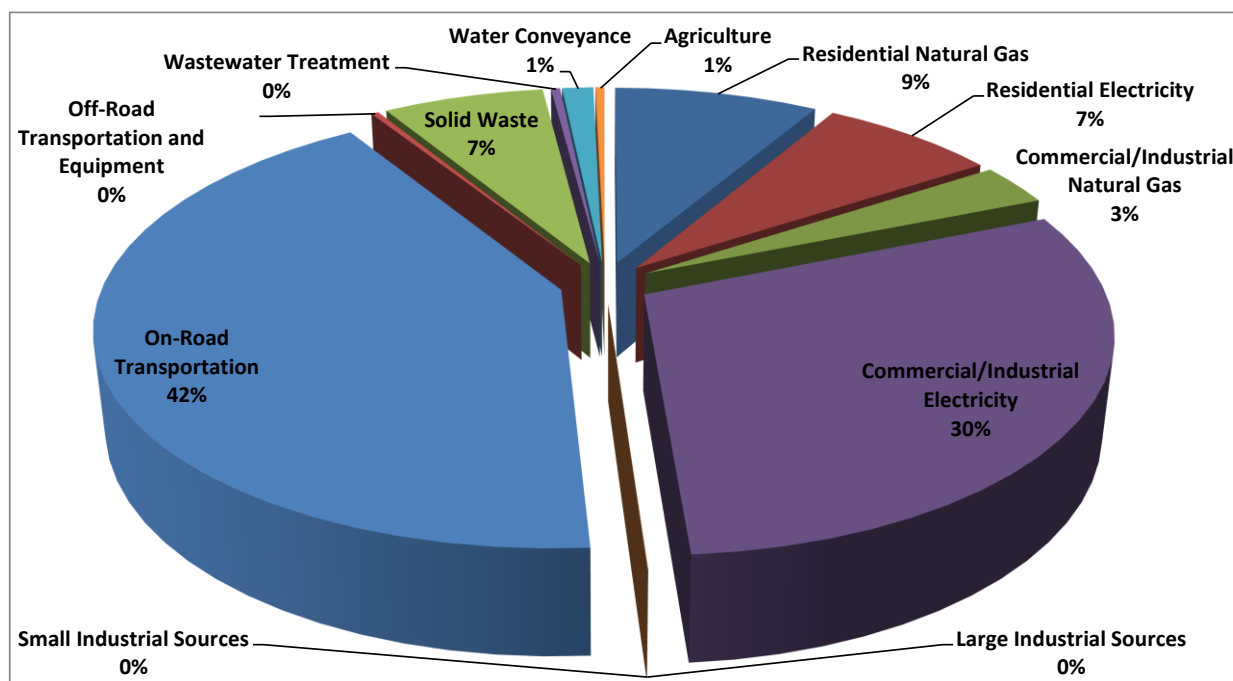
<sup>a</sup> Values may not sum due to rounding.

<sup>b</sup> Additional emissions sources that were not estimated (or included in the inventory) include the military, marine ships, aircraft, public transit, freight rail, non-local passenger rail, Los Angeles World Airports (LAWA) activities, the ports of Los Angeles and Long Beach, ozone depleting substances, and other high global warming potential gases. Emissions associated with LAWA activities, such as building energy use and off-road equipment, were either included in other sectors of the inventory or were not included due to data and modeling limitations.

<sup>c</sup> Includes electricity used to pump groundwater (supply), treat water in water treatment plants (treatment), and pump water to the cities (distribution). Most or all of this electricity is likely already included in the building energy sector under Commercial/Industrial Electricity so a separate line item is not shown in the inventory total proper. However, the estimated emissions were quantified separately for later use in climate action planning.

<sup>d</sup> Includes urban trees and natural forest within the County. The ICLEI U.S. Community Protocol (2012) recommends that sequestration emissions not be added to inventories of anthropogenic emissions but disclosed separately.

<sup>e</sup> Includes forests in national parks and national forests.

**Figure ES-1. 2010 GHG Inventory for Unincorporated LA County by Sector (MT CO<sub>2</sub>e)**

Total emissions in 2010 were 7,982,720 MT CO<sub>2</sub>e, approximately 1.8% of California's GHG emissions in 2010.<sup>1</sup> In 2010, the top three sources of emissions in unincorporated LA County were:

- Building energy use<sup>2</sup>
- On-road transportation
- Solid waste

Total GHG emissions in the building energy sector in 2010 were 3,906,213 MT CO<sub>2</sub>e, which represents 49% of total unincorporated emissions (Table ES-1). Building energy is often one of the largest sources of GHG emissions in community inventories and includes residential, commercial, and industrial components. Emissions result from energy consumed to heat, cool, and light buildings, and from natural gas used for cooking.

Total GHG emissions from on-road transportation were 3,359,231 MT CO<sub>2</sub>e in 2010, which represents 42% of total unincorporated emissions. On-road transportation is typically a considerable component of a community's total GHG emissions, ranging from 30% to 70%, depending upon other sources and local conditions. Statewide on-road transportation emissions are approximately 40% of total emissions in California.<sup>3</sup>

<sup>1</sup> Statewide GHG emissions in 2010 were 449.59 million MTCO<sub>2</sub>e (California Air Resources Board 2013).

<sup>2</sup> Includes electricity and natural gas use in residential, commercial and industrial buildings

<sup>3</sup> Of the total 2010 transportation emissions in California, light-duty vehicles (passenger cars, light-duty trucks and SUVs, and motorcycles) account for 71% of emissions (27% of statewide emissions); heavy-duty trucks, buses, and motorhomes account for 21% of emissions (8% of statewide emissions); and other transportation modes (aviation, rail, water-borne, and not-specified) account for the remaining 8% of emissions (3% of statewide emissions),

Total GHG emissions from solid waste were 535,148 MT CO<sub>2</sub>e in 2010, which represents 7% of total unincorporated emissions. For some communities, solid waste emissions represent a small component of the GHG footprint, but in others, they can be substantial, depending on the amount of waste disposal and the specific characteristics of nearby landfills.

Additional sources of GHG emissions in the County include off-road transportation and equipment; agriculture; water treatment and conveyance; and wastewater treatment.

## 2020 and 2035 Emissions Forecasts

The 2020 and 2035 adjusted forecasts for unincorporated LA County are summarized in Table ES-2. As discussed above, the forecasts are considered “adjusted” because they are more closely aligned with the *draft* General Plan than the *existing* General Plan (i.e., the true BAU condition).

Emissions forecasts for electricity-related emissions taken into account the recent closure of the San Onofre Nuclear Generation Station (SONGS). SONGS was a nuclear power plant that generated carbon-free electricity for Southern California Edison (SCE) in 2010 (the inventory year). The facility was permanently shut down in 2013, requiring the reinstatement of several natural gas plants and dramatically altering SCE’s power mix.

While the SONGS closure does not affect conditions in place during the inventory year, forecasting 2020 and 2035 electricity-related emissions based on SCE’s 2010 carbon intensity, which includes nuclear energy, requires an assumption regarding the replacement of SONGS with either a) other carbon-free sources, b) non-renewable sources such as natural gas or coal, or c) a combination of both carbon-free and non-renewable sources.

The California Public Utilities Commission (CPUC) approved a final decision (Rulemaking 12-03-014) regarding the long-term procurement for local capacity requirements due to the permanent retirement of SONGS in March 2014.<sup>4</sup> The decision outlines a strategy that would replace electricity generated by SONGS with a range of renewable, energy storage, natural gas, and other resources. The decision allows for procurement flexibility of renewable/energy storage that ranges between 40% and 60%. For the purposes of this analysis, a midpoint between the range of 50% renewable/energy storage and 50% natural gas (including “other resources”) was used. Therefore, electricity-related emissions were forecasted to 2020 and 2035 assuming that SONGS would be replaced by 50% renewable and 50% natural gas resources.

As shown in Table ES-2, adjusted emissions are expected to increase throughout the community by approximately 13% from 2010 to 2020 and by 32% from 2010 to 2035. These increases will occur primarily because of increases in VMT, building energy use, and off-road equipment. As the population and employment in unincorporated LA County grow, transportation activity and energy consumption will increase. Likewise, off-road equipment emissions will increase as a result of increased development and construction activity. The assumed replacement of SONGS with 50% natural gas power also contributes to the forecasted increase in building energy emissions.

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<sup>4</sup> See <http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M088/K979/88979084.PDF>.

**Table ES-2. 2020 and 2035 Adjusted GHG Emissions Forecasts for Unincorporated LA County by Sector (MT CO<sub>2</sub>e)<sup>a</sup>**

Emissions Sector	2020 Adjusted Forecast		2035 Adjusted Forecast		Change from 2010	
	Emissions	% of Inventory	Emissions	% of Inventory	2020	2035
<b>Included Emissions</b>						
Residential Natural Gas	738,376	8%	880,665	8%	9%	30%
Residential Electricity	724,192	8%	863,378	8%	23%	47%
Commercial/Industrial Natural Gas	270,466	0%	323,657	3%	10%	31%
Commercial/Industrial Electricity	2,975,309	33%	3,559,697	34%	24%	49%
Large Industrial Sources	237	0%	269	0%	8%	23%
Small Industrial Sources	1,152	0%	1,306	0%	8%	23%
On-Road Transportation	3,657,532	40%	4,208,180	40%	9%	25%
Off-Road Transportation and Equipment	26,797	0%	32,058	0%	9%	31%
Solid Waste	500,952	6%	482,258	5%	-6%	-10%
Wastewater Treatment	32,526	0%	38,793	0%	9%	30%
Water Conveyance	97,788	1%	115,824	1%	2%	20%
Agriculture	30,141	0%	29,948	0%	0%	-1%
<i>Total Emissions<sup>b</sup></i>	<i>9,055,469</i>	<i>100%</i>	<i>10,536,035</i>	<i>100%</i>	<i>13%</i>	<i>32%</i>
<b>Emissions for Informational Purposes<sup>c</sup></b>						
Water Supply, Treatment, and Distribution <sup>d</sup>	43,120	-	50,316	-	7%	25%
Urban and Natural Forests <sup>e</sup>	-44,418	-	-34,998	-	-8%	-28%
National and State Forests <sup>f</sup>	-896,380	-	-896,380	-	0%	0%
<i>Total Informational Emissions<sup>a</sup></i>	<i>-897,679</i>		<i>-881,062</i>		<i>-1%</i>	<i>-3%</i>

**Notes:**

<sup>a</sup> The emissions estimates do not take into account the majority of future GHG reduction efforts, but are forecast based on projected growth in socioeconomic and other factors. The forecasts are considered “adjusted” because they are more closely aligned to the data and assumptions used to generate the draft General Plan build-out scenario for the General Plan Update rather than the existing General Plan build-out and therefore do not represent a “business-as-usual” scenario. The VMT data used to forecast transportation emissions also assume implementation of the SCAG’s 2012 RTP, including workplace TDM and land use strategies that will contribute to emissions reductions. Finally, the building energy sector assumes that power generated by SONGS under the inventory year (2010) would be replaced with power generated by 50% renewable and 50% natural gas resources.

<sup>b</sup> Values may not sum due to rounding.

<sup>c</sup> Emissions are presented for informational purposes only.

<sup>d</sup> Includes electricity used to pump groundwater (supply), treat water in water treatment plants (treatment), and pump water to the cities (distribution). Most or all of this electricity is likely already included in the building energy sector under Commercial/Industrial Electricity so a separate line item is not shown in the inventory total proper. However, the estimated emissions were quantified separately for later use in climate action planning.

<sup>e</sup> Includes urban trees and natural forests within the County. The ICLEI U.S. Community Protocol (2012) recommends that sequestration emissions not be added to inventories of anthropogenic emissions but disclosed separately.

<sup>f</sup> Includes forests in national parks and national forests.

Total emissions for unincorporated LA County in 2020 are projected to reach 9,055,469 MT CO<sub>2</sub>e, approximately 1.7% of California's 2020 BAU emissions forecast.<sup>5</sup> Emissions within unincorporated LA County are expected to increase to 10,536,035 MT CO<sub>2</sub>e by 2035. Emissions trends are similar to the 2010 inventory, with building energy use,<sup>6</sup> on-road transportation, and solid waste representing the top three sources of emissions.

GHG emissions from building energy use are expected to increase from 3,906,213 MT CO<sub>2</sub>e to 4,708,344 MT CO<sub>2</sub>e, or by 21% between 2010 and 2020. A similar rate of increase is expected through 2035, resulting in a 20% increase in emissions relative to 2020 (5,627,397 MT CO<sub>2</sub>e). Commercial and industrial electricity use is expected to produce the largest increase in emissions, followed by residential electricity use and natural gas consumption.

GHG emissions from on-road transportation are expected to increase from 3,359,231 MT CO<sub>2</sub>e in 2010 to 3,657,532 MT CO<sub>2</sub>e in 2020. This represents a 9% increase in emissions over inventory year conditions. Emissions are expected to reach 4,208,180 MT CO<sub>2</sub>e by 2035. These trends are driven by the light/medium duty sector, supplemented with rapid growth in heavy-duty vehicle miles traveled. Emissions generated by heavy-duty vehicles are expected to increase the fastest of all emissions sectors included in the forecast: 34% between 2010 and 2020 and 72% between 2010 and 2035. Unlike other sectors in the adjusted forecast, VMT data provided for 2020 and 2035 also account for some future planned highway and transit network improvements outlined in SCAG's 2035 RTP/SCS that will contribute to VMT and GHG emissions reductions. Because the transportation analysis accounts for some VMT reductions associated with the 2035 RTP/SCS, the emissions forecast for the on-road transportation sector likely underestimates actual emissions under a true BAU scenario.

GHG emissions from solid waste management are projected to decrease in both the 2020 and 2035 adjusted forecasts. Between 2010 and 2020, emissions are expected to decline by 34,196 MT CO<sub>2</sub>e (-6%); between 2010 and 2035, emissions are reduced by 52,890 MT CO<sub>2</sub>e (-10%). This trend is a result of improvements in methane capture rate (1% increase) and historic waste disposal trends.

All other sectors except agriculture (off-road transportation and equipment; water treatment and conveyance; and wastewater treatment) are expected to increase in emissions, relative to the 2010 inventory. Agriculture emissions are expected to decrease slightly. This trend is a result of reductions in agriculture activity.

## GHG Monitoring

Major emissions sources and expected GHG trends are identified in this report. Data and methods used to quantify the 2010 emissions inventory and estimate the 2020 and 2035 adjusted forecasts are also presented. As the County takes steps to reduce GHG emissions within unincorporated areas, updating the emissions inventory and forecasts will be critical for tracking progress and success. Regular GHG monitoring can also help identify effective strategies and potential issues, which will help the county make more informed decisions on future priorities, funding, and scheduling.

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<sup>5</sup> Statewide GHG emissions in 2020 are estimated at 544.78 million MTCO<sub>2</sub>e (California Air Resources Board 2013).

<sup>6</sup> Includes electricity and natural gas use in residential, commercial and industrial buildings

The Community Climate Action Plan prepared for the unincorporated County will articulate protocols for monitoring GHG emissions. Numerous protocols and tools are available to the County, such as the ICLEI U.S. Community Protocol (2012) for community inventories, Local Government Operations Protocol (LGOP) for municipal inventories (California Air Resources Board et al. 2010), California Community-Wide Greenhouse Gas Baseline Inventory Protocol White Paper by the Association of Environmental Professionals (AEP) (Association of Environmental Professionals 2011), and the Statewide Energy Efficiency Collaborative (SEEC) Community Inventory Tool (Statewide Energy Efficiency Collaborative 2012).

## Report Organization

The unincorporated County emissions inventory and forecasts documented in this report are presented in the following six chapters.

- Chapter 1, *Background Information*
- Chapter 2, *Inventory and Forecast Results by Emissions Sector*
- Chapter 3, *Methodology*
- Chapter 4, *Recommendations for Future Inventories*
- Chapter 5, *References*

The first chapter provides background information on unincorporated LA County. Chapter 2 presents the results of the 2010 emissions inventory and 2020 and 2035 adjusted forecasts. Chapter 3 discusses the procedures that were used to calculate GHG emissions, including standard protocols, emission factors, and methodologies. Chapter 4 provides recommendations for preparing future emissions inventories for the LA County Region. Document references are listed in Chapter 5.



# Chapter 1

## Background Information

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Greenhouse gas (GHG) emissions are directly correlated with the geography, climate, demographics, economy, and character of a community. Further, projections of GHG emissions reflect community growth with respect to future housing, jobs and infrastructure. Understanding the unique characteristics of unincorporated Los Angeles (LA) County is therefore critical to the GHG analysis presented in this report. A brief overview of unincorporated LA County is presented in this section. General concepts and terminology used throughout the document are also defined. Finally, background information on the science of climate change, is provided at the conclusion of the chapter.

### County Overview

As the most populous county within the nation, LA County is economically, socially, and geographically diverse. Unincorporated areas, which comprise approximately 65% of the total land area within the County, range from national forests and deserts to densely populated communities.

Weather within the region is characterized by a Mediterranean climate and is susceptible to areas of microclimates, especially between the coastal and inland areas. Mild to hot and dry summers with temperatures ranging from 69° Fahrenheit (F) at the coast to 83°F inland are common. Likewise, mild, rainy conditions with temperatures ranging from 43°F inland to 56°F at the coast are typical in the winter months (Western Regional Climate Center 2009).<sup>7</sup>

Approximately 1 million people live in the unincorporated areas of LA County, which is about one-tenth of the total County population. The majority of these reside in suburban communities, although rural residences are scattered throughout the County. Economic activity is highly diverse. In 2010, education and health accounted for 28% of jobs, while leisure-hospitality, professional-management, manufacturing, and retail industries together accounted for 41% of all jobs. Public administration, construction, wholesale, transportation, and finance made up 3% or more of the total jobs (Southern California Association of Governments 2011).

The diversity of land uses within the County presents both challenges and opportunities for long-range development. To facilitate planning of all unincorporated areas, the General Plan divides LA County into the following 11 planning areas. Figure 1-1 provides the geographic boundaries of the planning areas within LA County. For more detailed information on these regions, please refer to the General Plan.<sup>8</sup>

- Antelope Valley
- Coastal Islands
- East San Gabriel

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<sup>7</sup> These are monthly average temperatures for the months indicated. Coastal temperatures are represented by Western Regional Climate Center climate data for Santa Monica. Inland temperatures are represented by Western Regional Climate Center data for Lancaster.

<sup>8</sup> <http://planning.lacounty.gov/generalplan/draft>

- Gateway
- Metro
- San Fernando Valley
- Santa Clarita Valley
- Santa Monica Mountains
- South Bay
- West San Gabriel Valley
- Westside



Figure 1-1. LA County Planning Areas

## Socioeconomic Data and Growth Forecasts

As shown in Table 1-1, population within unincorporated LA County is anticipated to increase by 9% between 2010 and 2020 and by 30% between 2010 and 2035. Aggressive growth in housing and employment is likewise expected for unincorporated LA County, with homes and jobs each increasing by about 10% between 2010 and 2020.

## Report Definitions and Terminology

The following section explains important definitions and terminology used in this report.

**Adjusted Forecast:** The “adjusted” forecast represents a future scenario that does not consider the possible reduction of GHG emissions that may result from the majority of actions after the inventory or “existing” year. This adjusted forecast is based on socioeconomic data provided by the Southern California Association of Governments (SCAG) and utilized in its *2035 Regional Transportation Plan/Sustainable Communities Strategy* (RTP/SCS). This data for 2020 and 2035 is more closely aligned to the County’s *draft* General Plan assumptions than those in the *existing* General Plan; therefore, it is not a true BAU forecast.

The transportation sector is an exception in that it does account for the possible reduction of GHG emissions that may result from actions after the inventory year. Specifically, the vehicle miles travelled (VMT) data used to forecast transportation emissions to 2020 and 2035 accounts for all of the highway and transit projects outlined in SCAG’s 2035 RTP/SCS project list (Southern California Association of Governments 2012; Yoon pers. comm.). The SCAG 2035 RTP/SCS includes SCAG’s plans for integrating the transportation network and related strategies with the overall land use pattern. The SCAG 2035 RTP/SCS supports and complements the proposed transportation network and emphasizes system preservation, active transportation, and transportation demand management measures. The measures and projects outlined in the SCAG 2035 RTP/SCS will enhance traffic operations in the SCAG region and contribute to emissions reductions in the transportation sector.

**Community Inventory:** The community inventory includes GHG emissions occurring in association with the land uses within unincorporated County’s jurisdictional boundaries, and generally consists of sources of emissions that the community can influence or control. The inventory includes emissions that occur both inside and outside the jurisdictional boundaries, but only to the extent that such emissions are due to land uses and activities within the unincorporated County.

**Emissions Type:** GHG emissions can be defined as either direct (emissions that occur at the end use location, such as natural gas combustion for building heating) or indirect (emissions that result from consumption at the end use location but occur at another location, such as emissions from residential electricity use that occur at the power plant itself but result from in-home appliance or other use). This report addresses both types of emissions. In this report, the term *emission* refers to GHG emissions and not to emissions of criteria or toxic air pollutants.

**Unit of Measure:** The unit of measure used throughout this GHG inventory is the metric ton (MT) of carbon dioxide equivalent (CO<sub>2</sub>e). Presenting inventories in CO<sub>2</sub>e allows one to characterize the complex mixture of GHG as a single unit, taking into account that each gas has a different global warming potential (GWP).

**Table 1-1. 2010, 2020, and 2035 Population, Housing, and Employment Statistics for Unincorporated LA County**

Metric	Population			Households			Employment		
	2010	2020	2035	2010	2020	2035	2010	2020	2035
Value	1,064,595	1,158,648	1,381,927	304,054	334,721	403,762	241,427	264,412	316,413
Growth Rate from 2010	-	1.09	1.30	-	1.10	1.33	-	1.10	1.31
Source: Ryu personal communication 2013									

# The Science of Climate Change

## Global Warming

*Climate change* is a term used to describe large-scale shifts in existing (i.e., historically observed) patterns in earth's climate system. Although the climate has historically responded to natural drivers, recent climate change has been unequivocally linked to increasing concentrations of GHGs in the earth's lower atmosphere and the rapid timescale on which these gases have accumulated (Intergovernmental Panel on Climate Change 2007a). The rapid loading of GHGs into the atmosphere is due to the burning of fossil fuels since the industrial revolution.

Higher concentrations of heat-trapping GHGs in the atmosphere result in increasing global surface temperatures, a phenomenon commonly referred to as *global warming*. In the absence of anthropogenic (i.e., created by humans) emissions, GHGs play a critical role in maintaining the earth's temperature for successful habitation by humans and other forms of life.

Increases in fossil fuel combustion and deforestation have exponentially increased concentrations of GHGs in the atmosphere since the industrial revolution. Rising atmospheric concentrations of GHGs in excess of natural levels have increased global surface temperatures, which in turn result in changes to the earth's climate system. Warming of the earth's lower atmosphere is predicted to induce large-scale changes in planetary systems, including ocean circulation patterns, precipitation patterns, global ice cover, and biological distributions (Intergovernmental Panel on Climate Change 2007a, 2007b). Some of the above changes will result in specific impacts at the State and local level.

The Intergovernmental Panel on Climate Change (IPCC) was established by the World Meteorological Organization and United Nations Environment Programme to assess scientific, technical, and socioeconomic information relevant to the understanding of climate change, its potential impacts, and options for adaptation and mitigation. The IPCC identifies carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), perfluorinated carbons (PFCs), sulfur hexafluoride (SF<sub>6</sub>), and hydrofluorocarbons (HFCs) as key GHGs (Intergovernmental Panel on Climate Change 2007a). Each is discussed in detail below.

To simplify reporting and analysis, methods have been set forth to describe emissions of GHGs in terms of a single gas. The most commonly accepted method to compare GHG emissions is the GWP methodology defined in the IPCC reference documents. The IPCC defines the GWP of various GHG emissions on a normalized scale that recasts all GHG emissions in terms of CO<sub>2</sub>e, which compares the gas in question to that of the same mass of CO<sub>2</sub>, which has a global warming potential of 1 by definition.

Table 1-2 lists the global warming potential of CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, PFCs, SF<sub>6</sub>, and HFCs; their lifetimes; and abundances in the atmosphere.

**Table 1-2. Lifetimes and Global Warming Potentials of Several Greenhouse Gases**

Greenhouse Gases	Global Warming Potential (100 years)	Lifetime (years)	Current Atmospheric Abundance <sup>b</sup>
CO <sub>2</sub> (ppm) <sup>a</sup>	1	50–200	393
CH <sub>4</sub> (ppb)	25	12	1,874
N <sub>2</sub> O (ppb)	298	114	324
CF <sub>4</sub> (ppt) <sup>a</sup>	7,390	50,000	n/a
C <sub>2</sub> F <sub>6</sub> (ppt) <sup>a</sup>	12,200	10,000	n/a
SF <sub>6</sub> (ppt)	22,800	3,200	7.5
HFC-23 (ppt)	14,800	270	n/a
HFC-134a (ppt)	1,430	14	68
HFC-152a (ppt)	124	1.4	n/a

Sources: Intergovernmental Panel on Climate Change 2007a.

Notes: ppm = parts per million

ppb = parts per billion

ppt = parts per trillion

CF<sub>4</sub> and C<sub>2</sub>F<sub>6</sub> are PFCs

CO<sub>2</sub> concentration is from National Oceanic & Atmospheric Administration (2013); all other values are from Blasing (2013)

## Principal Greenhouse Gases

### Carbon Dioxide

CO<sub>2</sub> is the most important anthropogenic GHG and accounts for more than 75% of all GHG emissions caused by humans. Its atmospheric lifetime of 50–200 years ensures that atmospheric concentrations of CO<sub>2</sub> will remain elevated for decades even after efforts to reduce GHG concentrations are promulgated (Intergovernmental Panel on Climate Change 2007a). The primary sources of anthropogenic CO<sub>2</sub> in the atmosphere include the burning of fossil fuels (including motor vehicles), gas flaring, cement production, and land use changes (e.g., deforestation, oxidation of elemental carbon). CO<sub>2</sub> can be removed from the atmosphere by photosynthetic organisms.

Atmospheric CO<sub>2</sub> has increased from a pre-industrial concentration of 280 parts per billion (ppb) to 393 parts per million (ppm) in 2013 (Intergovernmental Panel on Climate Change 2007b and National Oceanic and Atmospheric Administration 2013).

### Methane

CH<sub>4</sub>, the main component of natural gas, is the second most abundant GHG and has a GWP of 25 (Intergovernmental Panel on Climate Change 2007a). Sources of anthropogenic emissions of CH<sub>4</sub> include growing rice, raising cattle, using natural gas, landfill outgassing, and mining coal (National Oceanic and Atmospheric Administration 2005). Certain land uses also function as both a source and sink for CH<sub>4</sub>. For example, the primary terrestrial source of CH<sub>4</sub> are wetlands, whereas undisturbed, aerobic soils act as a CH<sub>4</sub> sink (i.e., they remove CH<sub>4</sub> from the atmosphere).

Atmospheric CH<sub>4</sub> has increased from a pre-industrial concentration of 715 ppb to 1,874 ppb in 2013 (Intergovernmental Panel on Climate Change 2007b; Blasing 2013).

## Nitrous Oxide

N<sub>2</sub>O is a powerful GHG, with a GWP of 298 (Intergovernmental Panel on Climate Change 2007a). Anthropogenic sources of N<sub>2</sub>O include agricultural processes (e.g., fertilizer application), nylon production, fuel-fired power plants, nitric acid production, and vehicle emissions. N<sub>2</sub>O also is used in rocket engines, racecars, and as an aerosol spray propellant. Natural processes, such as nitrification and denitrification, can also produce N<sub>2</sub>O, which can be released to the atmosphere by diffusion. In the United States more than 70% of N<sub>2</sub>O emissions are related to agricultural soil management practices, particularly fertilizer application.

N<sub>2</sub>O concentrations in the atmosphere have increased 18% from pre-industrial levels of 270 ppb to 324 ppb in 2013 (Intergovernmental Panel on Climate Change 2007b; Blasing 2013).

## Perfluorinated Carbons

The most abundant PFCs are CF<sub>4</sub> (PFC-14) and C<sub>2</sub>F<sub>6</sub> (PFC-116). These anthropogenic chemicals are emitted largely from aluminum production and semiconductor manufacturing processes. PFCs are extremely stable compounds that are destroyed only by very high-energy ultraviolet rays, which results in a very long chemical lifetime.

## Sulfur Hexafluoride

SF<sub>6</sub>, an anthropogenic chemical, is used as an electrical insulating fluid for power distribution equipment, in the magnesium industry, in semiconductor manufacturing, and also as a tracer chemical for the study of oceanic and atmospheric processes (U.S. Environmental Protection Agency 2006). In 2010, atmospheric concentrations of SF<sub>6</sub> were 7.4 parts per trillion (ppt) and steadily increasing in the atmosphere. SF<sub>6</sub> is the most powerful of all GHGs listed in IPCC studies, with a GWP of 22,800 (Intergovernmental Panel on Climate Change 2007a).

## Hydrofluorocarbons

HFCs are anthropogenic chemicals used in commercial, industrial, and consumer products and have high GWPs (U.S. Environmental Protection Agency 2006). HFCs are generally used as substitutes for ozone-depleting substances (ODS) in automobile air conditioners and refrigerants. As seen in Table 1-2, the most abundant HFCs, in descending order, are HFC-134a, HFC-23, and HFC-152a.

## Greenhouse Gas Inventories and Emissions Sources

A GHG inventory is a quantification of all GHG emissions and sinks within a selected physical and/or economic boundary. GHG inventories can be performed on a large scale (i.e., for global and national entities) or on a small scale (i.e., for a particular building or person). Although many processes can be challenging to evaluate, several government and nongovernment bodies have developed tools and protocols to quantify emissions from many sources.

Over the last several decades, private and public entities including states, nations, cities, corporations, and universities, have sought to understand their GHG emissions and identify ways to decrease their carbon footprint. The first step in this process is the completion of a GHG inventory, essentially an audit of all sources of GHG emissions within a given boundary (jurisdictional,

geographical, or some combination of the two) and an assessment of their magnitude. Protocols and procedures exist for conducting a GHG inventory<sup>9</sup>—these are described in Chapter 3, *Methodology*. Since 2006 when AB 32 was signed into law, many local governments in California have completed a community GHG inventory. Because AB 32 establishes the year 2020 as the target year by which California should reduce its emissions, many communities in California are choosing to prepare a GHG forecast for the year 2020 in addition to their base year inventory.

LA County, with assistance from ICF International (ICF), has developed the following GHG inventories and estimates for community activities within the unincorporated areas. Emissions for a particular source were included in the inventory if either the source of emissions occurs within the geographic boundaries of the unincorporated County, or if the activity indirectly associated with a source of emissions occurs within the geographic boundaries of the unincorporated County (such as electricity consumption or waste disposal).

The 2010 inventory is based mostly on actual 2010 activity data (estimates were used for activity data in a few sectors) and year 2010 emission factors and includes all significant sectors contributing to GHG emissions, according to the guidelines of the CARB Local Government Operations Protocol (LGOP) (2010). This inventory was developed with sufficient detail to support identification of GHG reduction measures.

## Global, National, and Statewide GHG Inventories

The majority (83%) of U.S. GHG emissions are the result of burning fossil fuels. Fossil fuels are burned to create electricity that powers homes, commercial buildings, and vehicles. Energy used to power buildings is a primary source of GHGs in the U.S. and California. Vehicle emissions follow a close second, comprising approximately 30% of total national emissions and 37% of total statewide emissions (U.S. Environmental Protection Agency 2010; California Air Resources Board 2010). Other sources of GHG emissions include agriculture, land clearing, waste landfills, refrigerants, and certain industrial processes.

Table 1-3 displays the most recent global, national, and statewide GHG inventories to help contextualize the magnitude of LA County's GHG emissions.

**Table 1-3. Global, National, State, and Local GHG Emissions Inventories**

Emissions Inventory	CO <sub>2</sub> e (metric tons)
2004 IPCC Global GHG Emissions Inventory	49,000,000,000
2010 EPA National GHG Emissions Inventory	6,821,800,000
2010 CARB State GHG Emissions Inventory	449,590,000
Sources: Intergovernmental Panel on Climate Change 2007a; U.S. Environmental Protection Agency 2012; California Air Resources Board 2013.	

<sup>9</sup> No standard protocols and procedures currently exist for a community GHG inventory at the county or city scale. Current protocols cover municipal operations or national-level inventories.

## Chapter 2

# Inventory and Forecast Results by Emissions Sector

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This section presents the 2010 inventory and the 2020 and 2035 adjusted forecasts for unincorporated LA County. The results of the 2010 community inventory and the 2020 and 2035 adjusted forecasts are presented in Tables ES-1 through ES-2. Each subsection below describes a different sector of the inventory. Introductory information for each sector is followed by emissions results.

This chapter does not include an analysis of GHG emissions associated with the Coastal Islands Planning Area. Due to data limitations, the Coastal Islands Planning Area was excluded from the 2010 inventory and 2020 and 2035 adjusted forecasts. This data limitation is discussed further in Chapter 4, *Recommendations for Future Inventories*.

## Building Energy Use

Building energy consumption includes electricity and natural gas usage. Electricity use in buildings results in indirect emissions from the power plants that produce the electricity. Natural gas consumption by furnaces and other appliances in buildings results in direct emissions where the natural gas is combusted. Building energy use emissions are generally a function of the number of residents, types and ages of buildings, composition of the power supply, and the number of employees.

Table 2-1 presents the 2010 emissions inventory and 2020 and 2035 adjusted forecasts for building energy use. As shown in Table 2-1, building energy use from residential, commercial, and industrial buildings and use is the largest component of the unincorporated County inventory, accounting for 49% of total emissions in 2010 (3,906,213 MT CO<sub>2</sub>e). Emissions are expected to increase by 21% between 2010 and 2020 and by 44% between 2010 and 2035. Increases in electricity and natural gas consumption as a result of population and employment growth underpin much of this trend. However, the assumed replacement of SONGS with 50% renewables and 50% natural gas power also contributes to the forecasted increase in building energy emissions.

**Table 2-1. Building Energy GHG Emissions for Unincorporated LA County: 2010 Inventory and 2020 and 2035 Adjusted Forecast**

Analysis Year	MT CO <sub>2</sub> e	% of Unincorporated County Inventory	Emissions Change
2010 Inventory	3,906,213	49%	-
2020 Adjusted Forecast	4,708,344	52%	21%
2035 Adjusted Forecast	5,627,397	53%	44%

## Stationary Sources

This source includes emissions from stationary (typically industrial) combustion of fossil fuels and fugitive emissions from industrial processes. Emissions for large industrial facilities include natural

gas combustion. These natural gas emissions partially overlap with the building energy sector (discussed above), since natural gas was included in the data provided by the utilities. Note that large stationary sources are regulated by the State of California (under AB 32 through cap-and-trade) and EPA (under the Clean Air Act). Smaller stationary sources are often, but not always, regulated by federal and State agencies and the South Coast Air Quality Management District (SCAQMD).

The only facility located in the unincorporated County that reported emissions to EPA for 2010 was the Calabasas Sanitary Landfill.<sup>10</sup> Stationary fuel use for all other sources was obtained from the SCAQMD.

To avoid double-counting with indirect electricity emissions, fuel use for electricity generation is not included in the stationary sources inventory. As electricity is provided through an integrated electricity grid, the emissions are derived from electricity generated by sources that are both within and outside Los Angeles County; the inventory quantifies emissions based on electricity consumption in the County, rather than by the production of that electricity.

Table 2-2 summarizes emissions estimates for the 2010 inventory and 2020 and 2035 adjusted forecasts.

**Table 2-2. Stationary Source GHG Emissions for Unincorporated LA County: 2010 Inventory and 2020 and 2035 Adjusted Forecast (MT CO<sub>2</sub>e)**

Analysis Year	MT CO <sub>2</sub> e	% of Unincorporated County Inventory	Emissions Change
2010 Inventory	1,283	0.02%	-
2020 Adjusted Forecast	1,390	0.02%	8%
2035 Adjusted Forecast	1,575	0.01%	23%

## On-Road Transportation

On-road transportation includes emissions from two sources: light/medium-duty vehicles and heavy-duty trucks. Emissions generated by vehicles traveling on County roadways result from the combustion of fossil fuels (such as diesel, gasoline, compressed natural gas, etc.). Consistent with the statewide Regional Targets Advisory Committee (RTAC) recommendations, VMT were calculated using the transportation origin/ destination modeling methodology. This methodology calculates daily VMT by 5 mile-per-hour speed increments and accounts for the three following types of vehicle trips.

<sup>10</sup> Emissions from this landfill only include stationary fuel combustion; fugitive methane emissions from waste decomposition in the landfill are included in the solid waste management sector of the inventory.

1. Vehicle trips that originated and terminated within the unincorporated County
2. Vehicle trips that either originated or terminated (but not both) within the unincorporated County
3. Vehicle trips that neither originated nor terminated within the unincorporated County. These trips are commonly called pass-through trips.

Using the “accounting rules” established by RTAC, VMT from the trips of type 1, 2, and 3 were weighted by 1, 0.5, and 0 respectively towards jurisdiction-generated VMT. Please note that VMT associated with transit vehicles (e.g., LA Metro) were not included in the unincorporated inventory. VMT data for public transit buses was not available at the time of this inventory report. The Regional Inventory quantifies transit emissions on a County or regional level based on fuel consumption. It is important to note that LA Metro’s sustainability goals, which include maximizing alternative fuels and efficiency, will contribute to long-term emissions reductions in the public transit sector. For additional information on the transit sector, please refer to the Regional Inventory.

Table 2-3 presents VMT and GHG emissions estimates for light/medium-duty vehicles and heavy-duty vehicles. Table 2-4 presents total on-road transportation emissions for all analysis years. As shown in Table 2-4, total emissions generated by on-road vehicles accounted for approximately 42% of total unincorporated emissions in 2010 (3,359,231 MT CO<sub>2</sub>e).

Emissions are expected to increase by 9% between 2010 and 2020 and by 25% between 2010 and 2035. As discussed previously, the VMT data provided for 2020 and 2035 account for some future planned highway and transit network improvements outlined in SCAG’s 2035 RTP/SCS. It is difficult to estimate VMT without the highway and network assumptions since the specific parameters/variables are embedded in the transportation model. Because the transportation analysis accounts for some VMT reductions associated with the 2035 RTP/SCS, the emissions forecast for the on-road transportation sector likely underestimates actual emissions under a true BAU scenario.

**Table 2-3. Light/Medium-Duty Annual VMT and GHG Emissions for Unincorporated LA County<sup>a</sup>**

Analysis Year	Light/Medium Duty Vehicles		Heavy-Duty Vehicles	
	VMT	MT CO <sub>2</sub> e	VMT	MT CO <sub>2</sub> e
2010 Inventory	6,778,823,082	3,016,366	335,798,280	342,865
2020 Adjusted Forecast	7,322,209,100	3,196,817	424,847,521	460,715
2035 Adjusted Forecast	8,325,028,723	3,618,992	535,812,810	589,188

Notes:

<sup>a</sup> The VMT data provided by SCAG for 2020 and 2035 account for some future planned highway and transit network improvements that are part of SCAG’s 2035 RTP/SCS.

**Table 2-4. Total On Road Transportation GHG Emissions for Unincorporated LA County: 2010 Inventory and 2020 and 2035 Adjusted Forecast<sup>a,b</sup>**

Analysis Year	MT CO <sub>2</sub> e	% of Unincorporated County Inventory	Emissions Change
2010 Inventory	3,359,231	42%	-
2020 Adjusted Forecast	3,657,532	40%	9%
2035 Adjusted Forecast	4,208,180	40%	25%

Notes:

Transit emissions are not included in the heavy-duty vehicle estimate. Please refer to the Regional Inventory for a discussion of transit emissions.

See prior note about SCAG's 2035 RTP/SCS.

## Off-Road Transportation and Activity

Off-road equipment includes vehicles that do not operate on County roadways. Direct emissions of CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O are generated by equipment fuel combustion. The major off-road emissions sources include industry, construction, lawn and garden maintenance, recreational, and agriculture equipment. Off-road transportation emissions are generally a function of non-retail and industrial employment and activity.

Table 2-5 summarizes off-road emissions for the entire unincorporated County by equipment type. Table 2-6 presents the sector-wide emissions estimates in 2010, 2020, and 2035. As shown in Table 2-6, off-road emissions accounted for approximately 0.3% of total unincorporated County 2010 inventory (24,480 MT CO<sub>2</sub>e). Emissions are expected to increase by 9% between 2010 and 2020 and by 31% between 2010 and 2035. The majority of this growth is driven by construction activity.

**Table 2-5. Unincorporated LA County Off-Road Emissions by Equipment Type (MT CO<sub>2</sub>e)**

Equipment	2010	2020	2035
Agricultural Equipment	94.67	103.68	124.07
Construction and Mining Equipment	21,029	23,031	27,561
Entertainment Equipment	10	11	13
Industrial Equipment	669	732	877
Lawn and Garden Equipment	1,963	2,137	2,549
Light Commercial Equipment	313	343	410
Railyard Operations	0.09	0.10	0.12
Recreational Equipment	37.84	41.19	49.12
Transport Refrigeration Units	362.98	397.53	475.71
<i>Total</i>	<i>24,480</i>	<i>26,797</i>	<i>32,058</i>

**Table 2-6. Off-Road GHG Emissions for Unincorporated LA County: 2010 Inventory and 2020 and 2035 Adjusted Forecast**

Analysis Year	MT CO <sub>2</sub> e	% of Unincorporated County Inventory	Emissions Change
2010 Inventory	24,480	0.3%	-
2035 Adjusted Forecast	26,797	0.3%	9%
2010 Inventory	32,058	0.3%	31%

## Solid Waste

Waste-related emissions are primarily CH<sub>4</sub>, which is released over time when waste decomposes in a landfill. Organic waste that is buried in landfills decomposes under anaerobic conditions to produce CH<sub>4</sub>. Waste generated by the County will be either diverted (through recycling, composting, etc.) or transported to a landfill.

Although some landfills receiving waste generated by the unincorporated County may not be located within the County boundaries, the activities that produce waste do occur within County limits and these emissions were allocated to the County. From 1995 to 2010, unincorporated LA County deposited its waste in 20 waste facilities. All of these facilities are located inside the County; some are in incorporated cities and some are in the unincorporated County.

Table 2-7 presents the 2010 emission inventory and 2020 and 2035 adjusted forecast for solid waste for unincorporated County. As shown in Table 2-7, solid waste emissions represent approximately 7% of total unincorporated emissions in 2010 (535,148 MT CO<sub>2</sub>e). CH<sub>4</sub> emissions are expected to decrease between 2010 and 2020. This trend is a result of improvements in methane capture rate (1% increase) and historic waste disposal trends. Emissions will continue to decrease between 2010 and 2035.

**Table 2-7. Solid Waste GHG Emissions for Unincorporated LA County: 2010 Inventory and 2020 and 2035 Adjusted Forecast**

Analysis Year	MT CO <sub>2</sub> e	% of Unincorporated County Inventory	Emissions Change
2010 Inventory	535,148	7%	-
2020 Adjusted Forecast	500,952	6%	-6%
2035 Adjusted Forecast	482,258	5%	-10%

## Wastewater Treatment

The primary providers of wastewater management services for unincorporated LA County include the County Sanitation Districts, Department of Public Works (DPW), and municipal septic or wastewater systems. The treatment of industrial, residential, and commercial wastewater produced within the unincorporated County generates indirect and direct GHG emissions. Indirect emissions are a result of energy consumption at each wastewater treatment plant (WWTP) serving the County. However, since this energy consumption at WWTPs serving the County was not separately available from the utilities, it could not be disaggregated from the building energy sector (and therefore

associated emissions are included in the building energy sector). Direct emissions of CH<sub>4</sub> and N<sub>2</sub>O are produced during waste processing (fugitive emissions). This sector only includes fugitive emissions.

Table 2-8 presents the 2010 emission inventory and 2020 and 2035 adjusted forecast for wastewater treatment for unincorporated County. As shown in Table 2-8, wastewater treatment emissions represent a minor component of the 2010 inventory for unincorporated LA County. Emissions are expected to increase steadily between 2010 and 2020 and 2010 and 2035. Despite this growth, wastewater treatment will represent less than 1% of total unincorporated County emissions.

**Table 2-8. Wastewater Treatment GHG Emissions for Unincorporated LA County: 2010 Inventory and 2020 and 2035 Adjusted Forecast**

Analysis Year	MT CO <sub>2</sub> e	% of Unincorporated County Inventory	Emissions Change
2010 Inventory	29,885	0.4%	-
2020 Adjusted Forecast	32,526	0.4%	9%
2035 Adjusted Forecast	38,793	0.4%	30%

## Water Conveyance

Water conveyance emissions accounted for approximately 1.3% of total emissions in 2010. Water-related emissions originate from energy used to transport water to the County. Emissions from water were estimated for the energy associated with water transport from *outside* the unincorporated areas (such as regional pumps delivering water from the State Water Project). Electricity used to pump groundwater, treat and distribute water locally is captured within the building energy sector and in the water supply, treatment, and distribution sector discussed below.

Table 2-9 presents the 2010 emission inventory and 2020 and 2035 adjusted forecast for water consumption for unincorporated County. Countywide, water consumption emissions represent less than 2% of total emissions and are expected to increase between 2010 and 2020 and 2010 and 2035. This trend is a result of future water demand due to a growing population (or growing commercial activity).

**Table 2-9. Water Treatment and Conveyance GHG Emissions for Unincorporated LA County: 2010 Inventory and 2020 and 2035 Adjusted Forecast**

Analysis Year	MT CO <sub>2</sub> e	% of Unincorporated County Inventory	Emissions Change
2010 Inventory	96,189	1.2%	-
2020 Adjusted Forecast	97,788	1.1%	2%
2035 Adjusted Forecast	115,824	1.1%	20%

## Agriculture

Sources of agriculture emissions include livestock production and crop management. Emissions of CH<sub>4</sub> and N<sub>2</sub>O can result from livestock production through enteric fermentation and manure management (Intergovernmental Panel on Climate Change 2006). Emissions of N<sub>2</sub>O can result from anthropogenic inputs of nitrogen into soil through fertilizers by way of a direct (directly from the soils to which the nitrogen is added/released) and indirect (following volatilization of ammonia and oxides of nitrogen from managed soils) pathway (Intergovernmental Panel on Climate Change 2006). Both direct and indirect emissions of N<sub>2</sub>O were calculated. The three general sources of agricultural emissions evaluated in this inventory include livestock enteric fermentation, livestock manure management, and N<sub>2</sub>O emissions from the application of fertilizer.

Table 2-10 presents the 2010 emission inventory and 2020 and 2035 adjusted forecast for agriculture. As shown in Table 2-10, agricultural activity is a small component of the total inventory, accounting for 0.4% of total emissions in 2010 (30,290 MT CO<sub>2</sub>e). These emissions are primarily generated by dairy operations. Countywide, future emissions are expected to decrease slightly, relative to 2010. This trend is a result of reductions in cropping activity. Livestock activity was assumed to remain constant.

**Table 2-10. Agriculture GHG Emissions for Unincorporated LA County: 2010 Inventory and 2020 and 2035 Adjusted Forecast**

Analysis Year	MT CO <sub>2</sub> e	% of Unincorporated County Inventory	Emissions Change
2010 Inventory	30,290	0.4%	-
2020 Adjusted Forecast	30,141	0.3%	-0.5%
2035 Adjusted Forecast	29,948	0.3%	-1%

## Sectors Presented for Informational Purposes

Emissions were calculated for several additional sectors for informational purposes only. These estimates were not added to the emissions total from the sectors discussed above.

### Water Supply, Treatment, and Distribution

This sector includes electricity used to pump groundwater (supply), treat water in water treatment plants (treatment) and pump water to the unincorporated County (distribution). This sector includes the energy associated with water usage *inside* the unincorporated County (such as local pumps distributing water within the County's boundaries). Most or all of this electricity is likely already included in the building energy sector under Commercial/Industrial Electricity. To avoid double-counting emissions in the inventory, a separate line item is presented for informational purposes.

The water treatment and conveyance emissions sector includes the following indirect emissions by activity: electricity consumption for water supply (primarily groundwater pumping, which largely occurs inside the County), water treatment (electricity use at water treatment plants, which are primarily located inside the County), and water distribution (local water pumps included inside the County).

Table 2-11 presents water supply, treatment, and distribution emissions sinks in 2010, 2020, and 2035. As shown in Table 2-11, emissions are expected to increase between 2010 and 2020, and between 2010 and 2035. Increases in water consumption as a result of population and employment growth underpin much of this trend. However, the assumed replacement of SONGS with 50% renewables and 50% natural gas power also contributes to the forecasted increase in electricity-related emissions.

**Table 2-11. Water Supply, Treatment, and Distribution: 2010 Inventory and 2020 and 2035 Adjusted Forecast (MT CO<sub>2</sub>e)**

Analysis Year	Emissions	Emissions Change (from 2010)
2010 Inventory	40,406	-
2020 Adjusted Forecast	43,120	7%
2035 Adjusted Forecast	50,316	25%

## Urban and Natural Forests

Unlike other sectors described above, urban and natural forests are emissions sinks since these areas actively sequester atmospheric CO<sub>2</sub>. “Natural forests” refers to forests that are not developed, and can include conservation areas, state and national forests and privately-owned forest land. “Urban forests” refers to trees planted within developed areas, including residential trees, urban parks, median trees, etc. While other land covers also sequester carbon (such as scrubland and grassland), by comparison to forested areas the amount of sequestration is far less. Wetlands can sequester large amount of carbon on a per acre basis, but overall the county has relatively limited wetland areas.

This sector represents a “snapshot” of sequestration for the entire County at a given moment in time (i.e., 2010). This will represent the current state of sequestration in the County, and will provide a sequestration value of the current natural vegetation in the inventory year. The sequestration data represents an emissions sink. Natural forests are part of the natural carbon cycle, and it isn’t appropriate to count them as an “offset” against anthropogenic emissions sources. Accordingly, natural lands are considered biogenic emissions sinks and as such, this sector is not part of the GHG inventory. Table 2-12 presents urban and natural forest emissions sinks in 2010, 2020, and 2035. As shown in Table 2-12, sequestered emissions are expected to decrease between 2010 and 2020 and 2010 and 2035. This trend is a result of reductions in natural forest cover sequestration over time due to development.

**Table 2-12. Sequestered Carbon Dioxide from Unincorporated Urban and Natural Forests: 2010 Inventory and 2020 and 2035 Adjusted Forecast (MT CO<sub>2</sub>e)**

Jurisdiction	2010	2020	2035	Emissions Change (2010–2020)	Emissions Change (2010–2035)
Urban and Natural Forests (in County jurisdiction)	-48,312	-44,418	-34,998	-8%	-28%
<i>National and State Forests<sup>a</sup></i>					
Angeles National Forest	894,666	894,666	894,666	0%	0%
Los Padres National Forest	1,714	1,714	1,714	0%	0%
Total Unincorporated County <sup>b</sup>	848,068	851,962	861,382	0%	2%

**Note:**

<sup>a</sup> The county does not have jurisdiction over federal land. Thus, no changes are expected for National Forest Land due to their fixed boundaries.

<sup>b</sup> Values may not sum due to rounding.



This section presents the overall methodology used to prepare the 2010 unincorporated County inventory and 2020 and 2035 adjusted emissions forecasts. This section discusses the inventory definitions, inventory protocols used, emissions factors, and analysis methods.

## Quantification Protocols

Numerous widely accepted protocols for estimating GHG emissions were used to prepare the unincorporated County inventory. At the time of the development of this inventory, there was no consensus community-level inventory protocol in the United States, municipal-level and national-level protocols serve as interim guidance documents for preparing community-level (e.g. county-level) GHG inventories. The protocols used in the development of the inventory and adjusted forecasts include those following (listed in order of applicability for the inventory).

- **ICLEI U.S. Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions** (ICLEI–Local Governments for Sustainability USA 2012). This protocol establishes a number of requirements for reporting community GHG emissions. The protocol requires inclusion of five basic emissions generating activities: use of purchased electricity, use of fuel in stationary applications, use of on-road motor vehicles, water consumption, and solid waste disposal. The protocol also recommends (but does not require) inclusion of other emissions sectors over which a jurisdiction has control or substantial influence. This inventory includes all the five basic emissions generating activities, as well as additional emission sectors under the control of the County (such as wastewater treatment and agricultural activity).
- **AEP California Community-Wide Greenhouse Gas Baseline Inventory Protocol White Paper** (Association of Environmental Professionals 2011). The purpose of this white paper is to provide recommendations to jurisdictions (cities and counties) on what could be included within a community-wide GHG emissions inventory and methodology for determining the geographic/jurisdictional boundary
- **CARB LGOP** (California Air Resources Board et al. 2010). This protocol is the standard for estimating emissions resulting from government buildings and facilities, government fleet vehicles, wastewater treatment and potable water treatment facilities, landfill and composting facilities, and other operations.<sup>11</sup>
- **Climate Registry General Reporting Protocol** (The Climate Registry 2009). This protocol provides guidance for preparing GHG inventories in California.

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<sup>11</sup> The National Association of Clean Water Agencies have commented on the LGOP and noted that uncertainty exists with respect to the calculation procedures. In several cases, significant conservatism is assumed in the LGOP equations. The EPA has acknowledged this issue in its 2012 GHG inventory for the United States. Despite its potential conservatism, the LGOP is employed in this analysis as it is a recognized model for estimating community emissions from wastewater treatment. Moreover, the assumed conservatism of the LGOP yields a worst-case analysis of wastewater emissions.

- **IPCC Guidelines for National Greenhouse Gas Inventories** (Intergovernmental Panel on Climate Change 2006). This document is the international standard for inventories and provides much of the inventory methodology used in the national and statewide emissions inventories.
- **CARB California Greenhouse Gas Inventory Data 1990–2006** (California Air Resources Board 2010). CARB’s documentation provides background methodology, activity data, protocols, and calculations used for California’s statewide inventory.
- **CEC Inventory of California Greenhouse Gas Emissions and Sinks: 1990–2004** (California Energy Commission 2006). This inventory provides useful methodology and emission factors for statewide GHG emissions inventorying.
- **EPA Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2008** (U.S. Environmental Protection Agency 2011). This inventory provides useful methodology and emission factors for nationwide GHG emissions inventorying.

## Emissions Sectors Included in the Analysis

As defined above, the unincorporated County inventory includes GHG emissions occurring within the boundaries of the unincorporated area. The following emissions sectors are included in the 2010 inventory and 2020 and 2035 adjusted emissions forecasts. The primary data source for each emission sector also is listed.

- **Building Energy:** natural gas and electricity consumption for the residential and commercial/industrial sectors. Data provided by utilities.
- **On-Road Transportation:** fuel consumption for light/medium-duty vehicles and heavy-duty trucks vehicles traveling in the unincorporated County. Data provided by SCAG (Leising pers. comm.).
- **Off-Road Transportation and Activity:** fuel consumption for off-road vehicles and equipment in the unincorporated County. Data provided by the OFFROAD model.
- **Stationary sources:** direct emissions from stationary combustion of fossil fuels of any type (except natural gas) and fugitive emissions from industrial processes. Data provided by SCAQMD, the Antelope Valley Air Quality Management District (AVAQMD), CARB, and EPA.
- **Solid Waste:** CH<sub>4</sub> emissions from waste generated by the unincorporated County and deposited in landfills. Data provided by the County of Los Angeles Department of Public Works Solid Waste Information Management System (SWIMS) and EPA’s Landfill Methane Outreach Program (LMOP).
- **Wastewater Treatment:** fugitive emissions from domestic wastewater treatment. Data provided by LADWP, individual WWTP websites, County Sanitation District staff (Griffith pers. comm.), and the LGOP.
- **Water Conveyance:** electricity consumption associated with water supply, conveyance, treatment, and distribution. Data provided by the Urban Water Management Plans (UWMPs) for major water agencies in the County.
- **Agriculture:** enteric fermentation, manure management, and fertilizer application from livestock and farming operations. Data provided by the Los Angeles County Agricultural Commissioner and the National Agricultural Statistics Service.

In addition, the following sectors were quantified but included separately from the unincorporated County inventory and adjusted emissions forecasts:

- **Water Supply, Treatment, and Distribution:** electricity consumption associated with water supply, water treatment, and water distribution. Data provided by the Urban Water Management Plans (UWMPs) for major water agencies in the County. Electricity use for these activities, and therefore associated emissions, are likely included in the utility data for the County and contained in the building energy sector (water-related electricity use could not be disaggregated from utility data).
- **Urban and Natural Forests:** Emission sinks from urban and natural forests. Data provided by LA County, U.S. Forest Service (USFS), and U.S. Department of Agriculture.

Sources not quantified or included in the inventory are listed below along with the reason these sources are excluded from the County inventory.

- **Military:** fuel combustion and energy use at military bases in the County is not included as this activity is under federal control, not County control.
- **Marine ships:** fuel combustion on water-borne vessels is not included as these ships are involved in interstate and international commerce which is not under County control.
- **Aircraft:** fuel combustion in aircraft (taxiing and flying) is not included as aircraft are involved in interstate and international commerce which is not under County control.
- **Freight rail:** fuel combustion in freight rail locomotives is not included as freight rail is involved in interstate commerce which is not under County control.
- **Public transit:** fuel combustion from busses and other public transit vehicles is not included due to the difficulty in a complex geography of the unincorporated County area for which it is difficult to accurately apportion transit emissions to the County. The County can influence transit emissions through interaction with transit agencies and its role in land use regulation, but it was not possible to assign these emissions to the County with any reasonable accuracy.
- **Non-local passenger rail:** fuel combustion in passenger trains that cross County boundaries is not included as the County does not control regional, state, and interstate passenger rail. In addition, there are methodological challenges to specifically assign passenger rail emissions to a single jurisdiction within a complex metropolitan area like the County.
- **Los Angeles World Airports (LAWA) activities:** gasoline, CNG LNG, and diesel fuel combustion from ground support equipment at LAWA airports is not included as these activities are under the authority of LAWA, which is an agency independent of the County.
- **Port Activities:** emissions from fuel combustion in ocean-going vessels, harbor craft, cargo handling equipment, rail locomotives, and heavy-duty vehicles operating on the terminals at the Port of Los Angeles and the Port of Long Beach is not included as the ports are under separate authority and are not controlled by the County.
- **Ozone Depleting Substances (ODS) and other high GWP gases:** fugitive emissions from ODS and high GWP gases (refrigerants, foams, etc.) are not included because data is not available on the specific use of these substances within the County area itself. Assignment of emissions using State or national per-capita average use was not considered sufficiently accurate to reflect actual local use within the County.

## 2020 and 2035 Adjusted Forecast

An adjusted emissions projection was developed for the years 2020 and 2035. These projections are a prediction of how community emissions may change by 2020 and 2035, without implementation of future reduction efforts for the *majority* of sectors. The transportation sector is an exception. The emissions forecasts account for some future planned highway and transit network improvements outlined in SCAG's 2012 RTP/ SCS (see Chapter 3 below for additional detail). The method used to forecast electricity-related emissions also differs from other sectors; emissions were forecasted to 2020 and 2035 assuming power generated by SONGS would be replaced by power from 50% renewables and 50% natural gas sources.

Table 3-1 summarizes the general methods for the emissions forecasts for each inventory sector listed above. Emissions were forecasted based on anticipated growth in population, housing, and employment (Table 1-1).

**Table 3-1. Unincorporated County Inventory 2020 and 2035 Forecast Methodology**

Sector	Forecasting Data	Data Sources
<b>Included Emissions</b>		
Building Energy	<u>Residential</u> Growth in housing with the SONGS adjusted SCE emission factor	SCAG
	<u>Commercial/Industrial</u> Growth in employment with the SONGS adjusted SCE emission factor	SCAG
On-Road Transportation	VMT projections from SCAG multiplied by emission factors forecasted for future years (EMFAC 2011)	SCAG CARB's EMFAC2011
Off-Road Transportation and Activity	Growth in population and employment applied OFFROAD2007 model output for 2020	SCAG CARB's OFFROAD2007
Stationary sources	Growth in employment applied to 2010 total emissions	SCAG
Solid Waste	Growth in population multiplied by per capita solid waste emissions	SCAG LA County's SWIMS
Water Conveyance	Future water withdrawal and demand projections	SCAG The Regional Water Demand Scenarios for Northeastern Illinois: 2005–2050 report
Wastewater Treatment	Urban Water Management Plan forecasts of per-capita water use rates and growth in population	SCAG UWMPs
Agriculture	<u>Fertilize Application</u> 1.20% annual reduction in cultivated land. <u>Livestock</u> 2010 emissions assumed to remain constant. This assumption likely overestimates future livestock emissions.	LA County
<b>Emissions for Informational Purposes</b>		
Water Supply, Treatment, and Distribution	Future water withdrawal and demand projections based on growth in population with the SONGS adjusted SCE emission factor	SCAG The Regional Water Demand Scenarios for Northeastern Illinois: 2005–2050 report
Urban and Natural Forests	LA County projections on change in unincorporated forest acreages for 2020 and 2035.	LA County

The methodology and assumptions for the adjusted projections are intended to produce a reasonable estimate of emissions for 2020 and 2035. Although the assumptions are supported by established inventory protocols and widely used inventory methodologies, the methodology for estimating the 2020 and 2035 adjusted forecast emissions for the County is subject to certain limitations. Specifically, in cases where future emission factor data are limited, the emission factors were assumed to remain constant from the current year's inventory. In addition, emissions were estimated based on historical and projected trends in associated emissions-generating activities. However, it is possible that future emissions may not actually follow these trends.

## Emission Factors

Emission factors and references are summarized in Table 3-2. These emission factors were used to calculate GHG emissions from activity data, such as kilowatt-hour (kWh) of electricity consumed for lighting or gallons of gasoline fuel combusted for on-road transportation.

**Table 3-2. Greenhouse Gas Emission Factors**

Source	Emission Factor	Reference
<b>Energy and Stationary Fuels</b>		
<b>Electricity</b>		
EPA WECC/CAMX (eGRID)	610.82 lbs CO <sub>2</sub> /MWh	EPA 2014 (2010 data)
	28.49 lbs CH <sub>4</sub> /GWh	EPA 2014 (2010 data)
	6.03 lbs N <sub>2</sub> O/GWh	EPA 2014 (2010 data)
Southern California Edison (2010)	610 lbs CO <sub>2</sub> e/MWh	Birenbaum pers. comm.
SONGS Adjusted Southern California Edison	692 lbs CO <sub>2</sub> e/MWh	-a
Natural Gas—General	53.02 kg CO <sub>2</sub> /MMBTU	CR 2012
Natural Gas—Industrial	0.001 kg CH <sub>4</sub> /MMBTU	CR 2012
	0.0001 kg N <sub>2</sub> O/MMBTU	CR 2012
Natural Gas—Residential and Commercial	5 kg CH <sub>4</sub> /MMBTU	CR 2012
	0.1 kg N <sub>2</sub> O /MMBTU	CR 2012
LPG, Propane, Butane (average)	5.99 kg CO <sub>2</sub> /gallon	CR 2012
	0.284 g CH <sub>4</sub> /gallon	CR 2012
	0.057 g N <sub>2</sub> O /gallon	CR 2012
Distillate Fuel Oil (average)	10.45 kg CO <sub>2</sub> /gallon	CR 2012
	0.423 g CH <sub>4</sub> /gallon	CR 2012
	0.085 g N <sub>2</sub> O /gallon	CR 2012
<b>Vehicle Fuels</b>		
Diesel	10.21 kg CO <sub>2</sub> /US Gallon	CR 2012
	0.0051 g CH <sub>4</sub> /mile	CR 2012
	0.0048 g N <sub>2</sub> O/mile	CR 2012
Gasoline	8.78 kg CO <sub>2</sub> /US Gallon	CR 2012
	0.0327 g CH <sub>4</sub> /mile	CR 2012
	0.0169 g N <sub>2</sub> O/mile	CR 2012
Propane	5.79 kg CO <sub>2</sub> /US Gallon	CR 2012

Source	Emission Factor	Reference
CNG	0.066 g CH <sub>4</sub> /mile	CR 2012
	0.175 g N <sub>2</sub> O/mile	CR 2012
	6.84 kg CO <sub>2</sub> /GGE	CR 2012
	0.054 kg CO <sub>2</sub> /scf	CR 2012
	1.966 g CH <sub>4</sub> /mile	CR 2012
	0.175 g N <sub>2</sub> O/mile	CR 2012
<b>Vehicle Travel</b>		
Light/Medium-Duty Vehicles	137.61 kg CO <sub>2</sub> /mile	CARB 2011
	7.50 g CH <sub>4</sub> /mile	CARB 2011
	7.51 g N <sub>2</sub> O/mile	CARB 2011
Heavy-Duty Trucks	288.01 kg CO <sub>2</sub> /mile	CARB 2011
	13.54 g CH <sub>4</sub> /mile	CARB 2011
	9.70 g N <sub>2</sub> O/mile	CARB 2011
<b>Agriculture—Enteric Fermentation</b>		
Dairy Cows	110 kg CH <sub>4</sub> /animal/year	CARB 2009
Beef Cows	53 kg CH <sub>4</sub> /animal/year	CARB 2009
Sheep	8 kg CH <sub>4</sub> /animal/year	CARB 2009
Hogs and Pigs	1.5 kg CH <sub>4</sub> /animal/year	CARB 2009
Goats	5 kg CH <sub>4</sub> /animal/year	CARB 2009
Agriculture—Manure Management		CARB 2011
Dairy Cows	166.05 kg CH <sub>4</sub> /animal/year	CARB 2011
	0.23 kg N <sub>2</sub> O /animal/year	CARB 2011
Beef Cows	2.65 kg CH <sub>4</sub> /animal/year	CARB 2011
	1.46 kg N <sub>2</sub> O/animal/year	CARB 2011
Sheep	0.78 kg CH <sub>4</sub> /animal/year	CARB 2011
	0.01 kg N <sub>2</sub> O/animal/year	CARB 2011
Hogs and Pigs	26.12 kg CH <sub>4</sub> /animal/year	CARB 2011
	0.02 kg N <sub>2</sub> O/animal/year	CARB 2011
Chickens	0.17 kg CH <sub>4</sub> /animal/year	CARB 2011
	0.001 kg N <sub>2</sub> O/animal/year	CARB 2011
Turkeys and Squab	0.09 kg CH <sub>4</sub> /animal/year	CARB 2011
	0.003 kg N <sub>2</sub> O/animal/year	CARB 2011
Goats	0.37 kg CH <sub>4</sub> /animal/year	CARB 2011
	0.00 kg N <sub>2</sub> O/animal/year	CARB 2011
<b>Agriculture—Fertilizer Application</b>		
Fertilizer Application (average)	90 lbs/acre	EPA 1999
Direct N <sub>2</sub> O (weighted average)	0.06 kg N <sub>2</sub> O/acre/year	CARB 2011
Indirect N <sub>2</sub> O (weighted average)	0.01 kg N <sub>2</sub> O/acre/year	CARB 2011
<b>Water-Related Electricity Intensities for Southern California</b>		
Water—Supply—Groundwater	4.45 kWh/MG-foot	CEC 2006
Water—Supply—Desalination	13,800 kWh/MG	CEC 2006
Water—Conveyance—SWP	8,325 kWh/MG	CEC 2006

Source	Emission Factor	Reference
Water—Conveyance—LA Aqueduct	8,325 kWh/MG	CEC 2006
Water—Conveyance—Colorado River	6,140 kWh/MG	CEC 2006
Water—Conveyance—Recycled	0 kWh/MG	CEC 2006
Water—Conveyance—Local Surface	120 kWh/MG	CEC 2006
Water Treatment	100 kWh/MG	CEC 2006
Water Distribution—Recycled	2,100 kWh/MG	CAPCOA 2010
Water Distribution—Other	1,200 kWh/MG	CEC 2006
Wastewater Treatment	1,911 kWh/MG	CEC 2006

CAPCOA = California Air Pollution Control Officers Association

CARB = California Air Resources Board.

CEC = California Energy Commission

CNG = compressed natural gas.

CO<sub>2</sub> = carbon dioxide.

CH<sub>4</sub> = methane.

N<sub>2</sub>O = nitrous oxide.

CR = The Climate Registry.

EPA = U.S. Environmental Protection Agency.

GGE = gasoline gallon equivalent

IPCC = Intergovernmental Panel on Climate Control

kg = kilogram.

kWh/MG = kilowatt hour per million gallons.

MG = million gallons.

MMBtu = million British thermal units

mmscf = million standard cubic feet

scf = standard cubic foot

<sup>a</sup> Calculated based on the following equation: (SCE 2010 Factor \* (Natural Gas Factor \* 19% \* 50%)), where the SCE 2010 Factor is 610 lbs CO<sub>2</sub>e/MWh, the Natural Gas Factor is 899 lbs/MWh, 19% represents the percentage of electricity supplied by SONGS in 2010, and 50% represents the assumed natural gas replacement (the other 50% of SONGS power is assumed to be replaced by renewable resources, which have a carbon intensity of zero).



## Chapter 4

# Recommendations for Future Inventories

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This section provides an overview of any limitations that were encountered during the analysis. Limitations may occur when data are not available or when data are not appropriate for the methodology used.

The 2010 inventory identifies GHG emissions from unincorporated activities in LA County, and serves as a foundation for climate action planning. Future updates to the unincorporated County inventory presented in this report should be conducted every few years to ensure that the inventory remains accurate and that data gaps are resolved in a timely manner. This also would enable efficient tracking of the effectiveness of any GHG reduction measures implemented by the County.

General recommendations for updates to future inventories are presented below, followed by recommendations for each emission sector.

## Quality and Availability of Activity Data

Although considerable efforts were made to obtain activity data,<sup>12</sup> in some cases these data were unavailable and the data had to be extrapolated using socioeconomic data. In addition, data obtained for certain sectors were provided in an aggregated format. For example, building energy use data provided by the major utilities supplying electricity and natural gas to the unincorporated County were aggregated by general sector (i.e., residential or commercial plus industrial) instead of by specific activity or entity. A greater level of detail and disaggregation would strengthen this inventory and greatly increase the potential for the County to identify, quantify, and monitor effective emission reduction actions. Specific data gaps and limitations are identified and discussed on a sector-by-sector basis below.

As described in the Executive Summary, electricity-related emissions were forecasted assuming power generated by SONGS in the inventory year (2010) would be replaced by power generated by 50% renewable and 50% natural gas sources. This assumption is based on the CPUC's final decision (Rulemaking 12-03-014) regarding the long-term procurement for local capacity requirements due to the permanent retirement of SONGS.

## Exclusion of the Coastal Islands Planning Area

Data for the Coastal Islands Planning Area is extremely limited. Natural gas consumption and VMT for on-road transportation was not available for individual planning areas. These emission sources constitute approximately 54% of the 2010 inventory for unincorporated LA County, representing a significant data gap. Future inventory efforts should include more robust data collection for energy use and vehicle activity in the Coastal Islands Planning Area. Natural gas data may be available from SCE in the future, and VMT could possibly be estimated using traffic counts or future SCAG modeling.

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<sup>12</sup> Such as total water use, building energy, transportation fuel use, stationary source emissions, and other forms of human activity.

A more complete inventory for the Coastal Islands Planning Area would improve the unincorporated County inventory and help the Coastal Islands Planning Area in future climate action planning efforts.

## Limitations and Recommendations for Included Emissions Sectors

### Building Energy Use

#### Inventory Limitations

- Nonresidential energy use was not available in additional, disaggregated categories (e.g., commercial, industrial, municipal).
- Water-related energy (i.e., energy used for pumping and water delivery) could not be disaggregated from the total electricity consumption provided by the utilities. As such, there may be some overlap and double-counting of emissions between the water treatment and conveyance sector and the building energy sector for water supply pumping, distribution, and treatment, since the utility data likely includes some of this electricity.

#### Forecast Limitations

- Power generated by SONGS in the inventory year (2010) is assumed to be replaced by power generated by 50% renewable and 50% natural gas sources. Electricity from all other sources (e.g., renewables, coal, hydro) and energy efficiency rates are held constant in future years.
- Energy-related emissions are directly proportional to population and employment for future years. It is likely that with future improvements in energy efficiency and consumer education, energy consumption will grow slightly slower than actual population or employment growth.
- Natural gas emission factors are held constant in future years.

#### Recommendations

- Collect utility data for more specific customer classes, perhaps by North American Industry Classification System (NAICS) code, to obtain electricity use for commercial and industrial activities separately.
- Collect utility data for electricity by planning area.
- Collect nonresidential natural gas consumption data for each planning area individually, instead of for the entire County as a whole.
- Update the 2020 and 2035 forecasts to represent future conditions as newer SCE emission factors become available.
- Request water-related electricity use data for the County from the utilities, to get a better picture of how the water sector contributes to electricity use.

## On-Road Transportation

### Inventory Limitations

- VMT data were not available from SCAG. Instead 2010 VMT were estimated using a linear interpolation from 2008 and 2012 VMT. SCAG recommended this approach to estimate 2010 VMT.
- VMT data were not available for the Coastal Island Planning Area. Therefore, the unincorporated area inventory for 2010 excludes emissions in the Coastal Islands. These are expected to be a very small portion of the total emissions.
- VMT associated with transit vehicles (e.g., LA Metro) were not included in the unincorporated County inventory because they were calculated on a county/regional level and could not be allocated to incorporated/unincorporated areas.

### Forecast Limitations

- Because VMT data were not available for Coastal Island Planning Area, the adjusted forecasts for 2020 and 2035 exclude emissions in the Coastal Islands. These are expected to be a very small portion of the total emissions.
- The VMT data provided by SCAG for 2020 and 2035 account for some future planned highway and transit network improvements outlined in SCAG's 2035 RTP/SCS. As these assumptions are integrated into the data, the VMT underestimates the adjusted VMT and associated emissions.

### Recommendations

- Develop an off-model method (e.g., targeted surveys, local level models) to quantify VMT in the Coastal Islands and obtain an estimate of GHG emissions occurring in those areas.
- Develop VMT and emissions estimates for transit emissions.

## Off-Road Transportation and Activity

### Inventory Limitations

- Off-road emission sources not included in the OFFROAD model, such as airport ground support equipment (GSE) at private airports and equipment at railyards, were not included in the inventory.
- Heavy and light rail (including commuter rail) emissions only available on a county-level and were not included in the unincorporated inventory.
- The OFFROAD model's default assumption of hours of operation for all equipment per year in the County was used to generate emissions.
- AMTRAK (intercity) rail was not included, since it traverses the boundaries of the County. Data for disaggregating AMTRAK emissions to the County were not available.
- Freight rail emissions were not included, since these trains traverse the boundaries of the County. Data for disaggregating freight rail emissions to the County were not available.

## Forecast Limitations

- The OFFROAD model's emissions forecasts are less accurate for years further into the future; for example, the forecasts for 2020 are likely more accurate than the forecasts for 2035. This occurs because since the possibility for unforeseen changes in off-road activity and technology increases as the time gap increases.
- The OFFROAD2007 model is currently being replaced by the OFFROAD 2011 model. Accordingly, OFFROAD2007 may have less accurate forecasts than the current version of the model.

## Recommendations

- Collect activity or emissions data for off-road equipment activity in each planning area.
- Include additional off-road sources in the inventory, such as airport GSE at private airports and equipment at railyards. GSE emissions could possibly be obtained from the airports themselves; railyard emissions could possibly be obtained through the CARB's *Railyard Health Risk Assessments and Mitigation Measures* webpage.<sup>13</sup>
- Include activity or emissions data for rail for each planning area in the County. Passenger miles for commuter rail services in each planning area could be calculated based on route miles and service schedules for each planning area, which could be used to determine emissions for each planning area.
- Utilize the OFFROAD2011 model, once publically available, to estimate emissions.

## Agriculture

### Inventory Limitations

- The amount of fertilizer applied per acre by crop type was taken from EPA estimates (U.S. Environmental Protection Agency 1999).
- Livestock related emissions (enteric fermentation and manure management) were calculated based on livestock categories provided by the LA County Agricultural Commissioner and the National Agricultural Statistics Survey and corresponding emission factors (Vittayavongvanich pers. comm.). Livestock emission factors from CARB are available by livestock category and also by subcategory within each category of animal (California Air Resources Board 2011). For each livestock category, subcategories with more precise emission factors are available. For example, CARB has emission factors for market swine under 60 pounds, market swine between 120 and 179 pounds, etc. Livestock data in the County were available only by broad category—swine, chickens, etc. The accuracy of the emissions calculations may be limited because of this discrepancy between the available emission factors and the data available. Due to the limited amount of livestock in the County, however, this data gap is most likely minor.

### Forecast Limitations

- Crop land forecasts are based on the County's assumption of countywide 1.2% annual reduction in agricultural lands. This assumption is based on aggregated trending data that the County has

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<sup>13</sup> See: <http://www.arb.ca.gov/railyard/hra/hra.htm>

reviewed and various sources from the Planning Department. These take into account changes in agricultural lands occur as private ownership of agricultural lands and local zoning policies change. While zoning policies are under the jurisdiction of local governments, and thereby knowable, changes in private ownership and usage of agricultural lands are dependent on the less predictable balance between the economic demands for crops and the land on which the crops are produced due to urbanization or development.

- Agricultural forecasts were assumed to equal emissions in 2010.

## Recommendations

- Collect fertilizer application rates specific to the County, if available.
- Collect livestock data at the same level of aggregation as CARB's emission factors in order to calculate emissions with a greater level of accuracy.

## Solid Waste

### Inventory Limitations

- Historic waste disposal data before 1995 (pertinent to some landfill opening years) was not available. Per capita waste disposal rates were estimated based on historical population information to estimate waste deposited before 1995.
- For modeling purposes to estimate waste disposal by landfill for years before current landfills were open, it was assumed that waste goes to an unknown landfill which represents the average characteristics of other landfills used by the unincorporated County.
- Landfill profile data was not available for some landfills; in these cases, default values from CARB's first order of decay (FOD) model were used.
- Actual CH<sub>4</sub> capture rates for most landfills with methane capture systems were not known. The default value of 75% was used for these landfills.
- Emissions from waste imported into LA County Landfills from jurisdictions outside of LA County are not included in the inventory.

### Forecast Limitations

- Forecasted emissions are based on 2010 per-capita waste disposal rates and population projections for unincorporated County. This assumes that the per-capita waste disposal rate does not change over time.
- Nonresidential waste disposal was not projected separately. Waste disposal was compared to the total population area to obtain per-capita waste disposal rates. These rates were then used to forecast waste emissions.
- The latest diversion rate available for the unincorporated County is for the year 2006. This diversion rate (54%) was assumed to remain constant for all future years. Changes to the diversion rate will be incorporated into the forthcoming community climate action plan.
- Landfill characteristics were assumed to remain constant in the future. For example, it was assumed that all landfills with methane capture systems would continue to capture CH<sub>4</sub> at the

same rate for all future years, and landfills without methane capture would not install capture systems in the future. This is consistent with a BAU approach to forecasting waste emissions.

- Population was assumed to grow linearly from 2010 to 2020 and from 2020 to 2035. Interim year population data was needed to estimate waste emissions using the FOD model, which requires waste disposal tonnages for each year.

## Recommendations

- Site-specific landfill CH<sub>4</sub> capture rates would improve this sector of the inventory. Although individual landfill operators may collect data onsite related to the maintenance and operation of gas flaring systems, these data are not always sufficient to estimate precise CH<sub>4</sub> destruction efficiency. Contact individual landfill operators to obtain actual methane capture monitoring and capture data for each landfill serving the planning areas (or at least the major landfills).
- Landfill site-based emissions (i.e., direct emissions from a specific landfill regardless of where the waste originated) or “waste-in-place” emissions for the largest landfills (landfills with greater than 10,000,000 tons of waste in place)<sup>14</sup> located in each planning area could be included in the unincorporated County inventory. Site-based analysis would not replace the generation-based estimates of solid waste emissions described above; it would be a supplement to those emissions.
- Continue to track waste disposal tonnages and destination landfill by planning area into the future. This will allow for more accurate inventory updates and forecasts of waste emissions in the future.

## Wastewater Treatment

### Inventory Limitations

- The energy consumed to operate any WWTP that is located within County borders was included in the building energy sector as it is typically contained in the utility data (nonresidential data). The utility data was not detailed enough to allow for the disaggregation of this energy for the County.
- Actual emissions data from the following WWTPs were used in the 2010 inventory: the Malibu Mesa Water Reclamation Plant, the Malibu Water Pollution Control Plant, the Trancas Water Pollution Control Plant, and the Lake Hughes Community Wastewater Treatment Facility. Specific data for additional WWTPs in the unincorporated County were not available. Consequently, the emissions data for the four WWTPs listed above were used to approximate fugitive wastewater treatment emissions for the remainder of the WWTPs serving the unincorporated County.
- Fugitive emissions are based on WWTP proxies and population data.
- This sector only includes fugitive emissions from wastewater treatment processes. It does not include emissions from electricity and natural gas consumed by the WWTPs in the County. These emissions are included in the building energy sector, since wastewater-specific energy use was not available from the utilities.

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<sup>14</sup> Due to the large number of landfills (according to CALRecycle, there are 280 disposal facilities in the county, including 19 landfills and 225 disposal sites), calculating site-based emissions for each landfill is infeasible.

## Forecast Limitations

- The energy required to treat wastewater remains constant in all future years.
- The treatment processes which emit fugitive GHG emissions remain constant in all future years.
- Emissions were assumed to be proportional to population for all future years (i.e., the 2010 wastewater emission rate per-capita was used to estimate emissions for 2020 using the 2020 population).

## Recommendations

- Collect actual energy use data (e.g., electricity and natural gas use) from each WWTP serving the planning areas in the County, if available, in order to estimate emissions for energy use. This data may be available through the utilities, although it may be protected through confidentiality agreements.
- Coordination with the LA County Sanitation District to obtain WWTP-specific activity, energy use, and/or emissions data would improve the accuracy of the wastewater treatment emissions estimates.
- Collect WWTP electricity and natural gas consumption data in order to estimate emissions for energy use. Care must be taken to avoid double-counting these emissions with the building energy sector.
- Calculate emissions for individual WWTPs using actual WWTP characteristics such as population served, cubic feet of digester gas produced per day, fraction of methane in digester gas, BOD5 load (biochemical oxygen demand of wastewater during decomposition occurring over a 5-day period), and the fraction of BOD5 removed during treatment.

## Water Conveyance

### Inventory Limitations

- Regional water energy intensities were used to calculate electricity and associated emissions from water treatment and conveyance. Although these intensities are fairly accurate for imported water, they may be less accurate for local water (e.g., groundwater supply, water treatment).

### Forecast Limitations

- The energy required to convey water remains constant in all future years.
- Statewide electricity emission factors are held constant in future years.

### Recommendations

- Local water energy intensities may be developed based on UWMPs and information from the Municipal Water Districts serving the planning areas. Local intensities may be more accurate than the regional intensities used in the 2010 inventory.

## Stationary Sources

### Inventory Limitations

- SCAQMD fuel use data was not provided on a facility basis which would have allowed more accurate apportioning of emissions to the County.
- Natural gas consumption for large industrial facilities was included in this sector in order to maintain a total emissions line-item which is subject to State Cap and Trade Regulation. If natural gas emissions were removed, then total emissions subject to Cap and Trade would not be present in the inventory. However, some of this natural gas use is included in the utility data, and some emissions are therefore already included in the building energy sector. The building energy sector does not account for 100% of large industrial facility natural gas use, as some of the facilities are supplied directly by markers not overseen or tracked by SoCal Gas.

### Forecast Limitations

- Stationary source emissions forecasts use growth factors proportional to the employment growth from the socioeconomic forecasts provided by Iteris (Olson pers. comm. 2012). Only employment growth in agriculture, construction, manufacturing, and transportation were considered. Any stationary source emissions resulting from other employment sectors would not be captured in this forecast.
- Using the employment growth factors assumes that the ratio of stationary source emissions to employee stays constant. Changes in technology that would improve efficiency of mechanisms that emit stationary sources would decrease this ratio. Likewise, changes in the economy could result in greater number of employees increase this ratio.
- Stationary source fuel emission factors are held constant in all future years.

### Recommendations

- Collecting stationary source emissions and fuel use data on a facility-basis would allow for a more complete inventory. However, due to privacy concerns, it may be politically and economically unfeasible to obtain this data from smaller entities. Despite this limitation, we recommend greater participation with SCAQMD and AVAQMD to develop more detailed inventories for the County.

## Limitations and Recommendations for Emissions Sectors Included for Informational Purposes

### Water Supply, Treatment, and Distribution

#### Inventory Limitations

- Water-related energy (i.e., energy used for pumping and water delivery) could not be disaggregated from the countywide total electricity consumption provided by the utilities. As such, there may be some overlap and double-counting of emissions between the water treatment and conveyance sector and the building energy sector for water supply, treatment, and distribution, since the utility data likely includes some of this electricity.

- Regional water energy intensities were used to calculate electricity and associated emissions from water treatment and conveyance. Although these intensities are fairly accurate for imported water, they may be less accurate for local water (groundwater supply, water treatment, etc.).

## Forecast Limitations

- The energy required to treat and distribute water remains constant in all future years.
- The electricity emission factor for SCE was adjusted to assume power generated by SONGS in the inventory year (2010) would be replaced by power generated by 50% renewables and 50% natural gas sources. Electricity from all other sources (e.g., renewables, coal, hydro) and energy efficiency rates are held constant in future years.

## Recommendations

- Request water-related electricity use data for the county from the utilities, to get a better picture of how the water sector contributes to electricity use in the County.
- Local water energy intensities may be developed based on UWMPs and information from the Municipal Water Districts serving the cities. Local intensities may be more accurate than the regional intensities used in the Regional Inventory.
- Update the 2020 and 2035 electricity emissions to represent future conditions as newer SCE emission factors become available.

## Urban and Natural Forests

### Inventory Limitations

- While a rich and valuable data set was already available through the LA Tree Canopy Cover geographic information system (GIS) layer and the NASS CropScape, these data sets only provide acreages and not numbers of trees in the area. The number of trees was estimated using an average canopy-to-tree ratio.
- Non-urban forest land areas in the unincorporated area were approximated using acreages from NASS for three forest types: deciduous, evergreen, and mixed. The carbon sequestration rates, however, represented a smaller, more specific, set of typical forest species provided by CEC. Applying the CEC carbon sequestration rates to the broader NASS forest categories may result in some minor misrepresentation of the actual carbon sequestration impacts of the unincorporated non-urban forests. Because both datasets aim to represent the aggregated South Coast forest area, this data gap is most likely minor.

### Forecast Limitations

- Future changes in urban and natural forest coverage are based on the County's assumptions as to the expected change in privately owned forest areas. Calculations assume an 8% reduction in private forest land by 2020 and 24% by 2035. Limitations behind these percent reduction assumptions also apply to the subsequent sequestration calculations. Public forest land is assumed to remain unchanged in the forecast years.

## Recommendations

- Although the method used is the most accurate approach given the available data, a more accurate method of developing a representative tree inventory would be to do an annual detailed tree survey. Due to the highly labor intensive nature of this approach, we recommend employing the arboreal expertise of USFS and local forest stakeholders to develop representative tree species profiles of the LA County areas and apply them to up-to-date GIS imagery of the urban and natural forests.

## Chapter 5

# References

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- Association of Environmental Professionals (AEP). 2011. *California Community-Wide Greenhouse Gas Baseline Inventory Protocol White Paper*. Available: [http://www.califaep.org/docs/WhitePaper\\_June2011.pdf](http://www.califaep.org/docs/WhitePaper_June2011.pdf). Accessed: May 29, 2012.
- Blasing, T. J. 2013. *Recent Greenhouse Gas Concentrations*. DOI: 10.3334/CDIAC/atg.032. Updated February.
- California Air Pollution Control Officers Association (CAPCOA). 2010. *Quantifying Greenhouse Gas Mitigation Measures*. Available: <http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf>. Accessed: May 31, 2012.
- California Air Resources Board. 2011. *California's 2000-2009 Greenhouse Gas Emissions Inventory Technical Support Document*. December.
- California Air Resources Board, California Climate Action Registry, Local Governments for Sustainability, and the Climate Registry. 2010. *Local Government Operations Protocol for the Quantification and Reporting of Greenhouse Gas Emissions Inventories*. Version 1.1. May 2010. Los Angeles, CA.
- California Air Resources Board. 2008. *Climate Change Scoping Plan*. Available: <http://www.arb.ca.gov/cc/scopingplan/document/scopingplandocument.htm>. Accessed: June 16, 2012.
- California Air Resources Board. 2009. *California's 1990-2004 Greenhouse Gas Emissions Inventory and 1990 Emissions Level – Technical Support Document*. Available: [http://www.arb.ca.gov/cc/inventory/doc/methods\\_v1/ghg\\_inventory\\_technical\\_support\\_document.pdf](http://www.arb.ca.gov/cc/inventory/doc/methods_v1/ghg_inventory_technical_support_document.pdf). Accessed: March 15, 2012.
- California Air Resources Board. 2011. *EMFAC2011*. Computer program, 2011. Available: <http://www.arb.ca.gov/msei/msei.htm> Accessed: June 8, 2012.
- California Air Resources Board. 2013. *California Greenhouse Gas Inventory for 1990-2010—by Category as Defined in the Scoping Plan*. Last Revised: August 2013. Available: [http://www.arb.ca.gov/cc/inventory/data/tables/ghg\\_inventory\\_scopingplan\\_00-10\\_2013-02-19.pdf](http://www.arb.ca.gov/cc/inventory/data/tables/ghg_inventory_scopingplan_00-10_2013-02-19.pdf). Accessed: November 5, 2013.
- California Climate Action Registry. 2009. *General Reporting Protocol*. Version 3.1. January.
- California Energy Commission. 2006. *Inventory of California Greenhouse Gas Emissions and Sinks 1990 to 2004. (CEC-600-2006-013-SF)*. December. Last revised: December 2006. Available: <http://www.energy.ca.gov/2006publications/CEC-600-2006-013/CEC-600-2006-013-SF.PDF> Accessed: January 21, 2011.
- ICLEI–Local Governments for Sustainability USA. 2012. *U.S. Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions*. October. Available: <http://www.icleiusa.org/tools/ghg->

- protocol/community-protocol/us-community-protocol-for-accounting-and-reporting-of-greenhouse-gas-emissions >. Accessed: April 8, 2013.
- Intergovernmental Panel on Climate Change. 2006. *2006 IPCC Guidelines for National Greenhouse Gas Inventories*. Available: <<http://www.ipcc-nggip.iges.or.jp/public/2006gl/vol4.html>>. Accessed: August 17, 2010.
- Intergovernmental Panel on Climate Change. 2007a. *Introduction*. In B. Metz, O. R. Davidson, P.R. Bosch, R. Dave, L.A. Meyer, (eds.), *Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, 2007*. Cambridge, U.K. and New York, NY, USA: Cambridge University Press. Available: <<http://www.ipcc.ch/pdf/assessment-report/ar4/wg3/ar4-wg3-chapter1.pdf>>. Accessed: August 11, 2009.
- Intergovernmental Panel on Climate Change. 2007b. *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*. Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K. B. Averyt, M. Tignor and H.L. Miller (eds.). Available: <<http://www.ipcc.ch/ipccreports/ar4-wg1.htm>>. Accessed: September 22, 2009.
- Los Angeles County. 2012. 2035 General Plan: Revised Draft May 2012 Text-Only Version. Available: <<http://planning.lacounty.gov/generalplan/draft2012>>. Accessed: July 10, 12.
- National Oceanic and Atmospheric Administration. 2005. *Greenhouse Gases: Frequently Asked Questions*. Available: <<http://lwf.ncdc.noaa.gov/oa/climate/gases.html>>. Accessed: September 22, 2009.
- National Oceanic and Atmospheric Administration. 2012. *Trends in Atmospheric Carbon Dioxide*. Earth System Research Laboratory, Global Monitoring Division. Last Updated: May 2012. Available: <<http://www.esrl.noaa.gov/gmd/ccgg/trends/index.html#global>>. Accessed June 15, 2012.
- National Oceanic and Atmospheric Administration. 2013. *Trends in Atmospheric Carbon Dioxide*. August 2013. Available: <<http://www.esrl.noaa.gov/gmd/ccgg/trends/global.html>>. Accessed: November 5, 2013.
- Southern California Association of Governments (SCAG). 2011. *Profile of the Unincorporated Area of Los Angeles County*. May 2011. Available: <<http://www.scag.ca.gov/resources/pdfs/2011LP/UnIncLosAngelesCounty.pdf>>. Accessed: May 31, 2012.
- Southern California Association of Governments. 2012. *2012–2035 Regional Transportation Plan/Sustainable Communities Strategy*. Project List Appendix. Adopted April 2012.
- Statewide Energy Efficiency Collaborative (SEEC). 2012. *SEEC Community Inventory Tool*. Available: <<http://californiaseec.org/tools-guidance/seec-community-inventory-tool>>. Accessed: March 20, 2012
- The Climate Registry. 2009. *Utility Emission Factors 04-07*. Available: <[www.climateregistry.org/resources/docs/PUP\\_Metrics-June-2009.xls](http://www.climateregistry.org/resources/docs/PUP_Metrics-June-2009.xls)>. Accessed: December 22, 2011.
- Intergovernmental Panel on Climate Change. 1996. *1995: Science of Climate Change. (Second Assessment Report)*. Cambridge, U.K.: Cambridge University Press.

- U.S. Environmental Protection Agency. 1999. *Background Report on Fertilizer Use, Contaminants, and Regulations*. Accessed February. Available: <<http://www.epa.gov/oppt/pubs/fertilizer.pdf>>. Accessed: March 15, 2012.
- U.S. Environmental Protection Agency. 2006. *High Global Warming Potential (GWP) Gases*. Available: <<http://www.epa.gov/highgwp/scientific.html>>. Accessed: September 22, 2009.
- U.S. Environmental Protection Agency. 2010. *Criteria Pollutant Information*. Last Revised: July 1, 2010. Available: <<http://www.epa.gov/air/urbanair/>>. Accessed: October 14, 2011.
- U.S. Environmental Protection Agency. 2011. *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2009*. EPA 430-R-11-005. April. Available: <<http://epa.gov/climatechange/emissions/usinventoryreport.html>>. Accessed: June 24, 2011.
- U.S. Environmental Protection Agency. 2012. *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2010*. EPA 430-R-12-001. April.
- U.S. Environmental Protection Agency. 2014. *eGRID*. Last Revised: February 24, 2014. Available: <<http://www.epa.gov/cleanenergy/energy-resources/egrid/index.html>>. Accessed: March 2014.
- Western Regional Climate Center (WRCC). 2009. *Climatological Summary*. Period of Record: Apr 1998 to Dec 2008. Available: <http://www.wrcc.dri.edu/summary/smo.ca.html> Accessed: June 1, 2012.

## Personal Communications

- Birenbaum, Evan. Sr. Program Manager. Environmental Strategy & Corporate Responsibility. Southern California Edison. October 28, 2013—email message with SCE 2010 emission factor.
- Griffith, Patrick. Senior Engineer. L.A. County Sanitation District, Los Angeles, CA. April 3, 2013—Email message to Connie Chung (LA County) regarding LACSD comments on the CAP for LA County Unincorporated Areas.
- Leising, Cheryl. Administrative Assistant. Southern California Association of Governments, Riverside, CA. September 4, 2013—email message to Rebecca Rosen, ICF International.
- Olson, Rob. Senior Transportation Engineer. Iteris, Santa Ana, CA. February 28, 2012—Email with socioeconomic data for Los Angeles County.
- Ryu, Sung Ho. Southern California Association of Governments, Riverside, CA. October 3, 2013—Email with socioeconomic data for Los Angeles County.
- Vittayavongvanich, Kanit. Inspector. Los Angeles County Department of Agricultural Commissioner Pesticide Regulation Division Environmental Bureau, Arcadia, CA. July 12, 2012—Email with dairy cattle numbers for Los Angeles County.
- Yoon, Sungsu. Southern California Association of Governments. September 24, 2013—email message to Rebecca Rosen, ICF International.



## Appendix C

# Actions to Reduce Greenhouse Gas Emissions

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This appendix summarizes the local and State actions included in the County's Community Climate Action Plan (CCAP). Local actions are summarized by the five strategy areas discussed in Chapter 4. The following information is provided for all actions, where appropriate.

- **Action Goal:** Intent and any tangible metrics.
- **Lead (Supporting) Entity:** Lead and (supporting) entity responsible for implementation of the action. A specific *County* department has been identified as the lead responsible entity for the majority of CCAP actions. Note that additional entities, including other County departments or external agencies, may also be involved in the implementation of these actions. Lead responsibility for a few CCAP actions will be at the discretion of external agencies. The County anticipates supporting the lead entities for these actions, as needed, to identify targets and other metrics to support action implementation.
- **Action Status:** Identifies whether greenhouse gas (GHG) emissions benefits are currently counted toward attainment of the County's CCAP target. The majority of actions where the County will serve as the lead responsible entity have been quantitatively evaluated. For some actions, explicit goals have not been established and are therefore not quantified or counted toward attainment of the County's CCAP target. In many cases, these actions build on existing actions and may result in additional GHG reductions in the future. The County will identify goals for these actions and quantify GHG reductions as part of future CCAP updates. GHG reductions associated with actions where external agencies are the lead have not been quantified as the County does not have direct control over action implementation.
- **Additional Information:** Existing initiatives related to specific actions.
- **Approaches:** Measures that may be implemented to achieve the action's goals. These measures are not inclusive and may be supplemented by additional measures and/or subject to change during the implementation phase of the CCAP.

## Green Building and Energy

### BE-1. Green Building Development

Action Goal: Promote and incentivize at least Tier 1 voluntary standards within CALGREEN for all new residential and nonresidential buildings. Develop a heat island reduction plan and facilitate green building development by removing regulatory and procedural barriers.

Lead (Supporting) Entity: Los Angeles (LA) County Internal Services Department (LA County Department of Regional Planning).

Action Status: GHG emissions benefits have been quantified and counted toward attainment of the County's CCAP target based on the metrics identified in the action goal.

**Additional Information:** Title 31 of the Los Angeles County Code currently requires 15% less energy use than the 2005 State Energy Efficiency Standards (Title 24). Under this action, the County would promote new development to incorporate the Tier 1 voluntary standards within CALGREEN. Adoption of the Tier 1 standards is voluntary, but would result in approximately 15% less energy use than the 2013 Title 24 standard for residential development and 10% less energy use than the 2013 Title 24 standard for commercial development. Compliance with Title 31 of the Los Angeles County Code and applicable State-mandated Title 24 standards is independent of this action and mandatory for all new development. The heat island mitigation plan to be developed by the County will include guidelines for cool roofs, cool pavements, and strategically placed shade trees.

**Approaches:** The following strategies may be used to help achieve the action goal and support implementation.

- Provide grants and other incentives and/or leverage outside grants, funding, and incentives to support green building.
- Provide green building outreach, training, and education. The County will continue to provide green building information, marketing, training, and technical assistance to property owners, development professionals, schools, and special districts through its current and new grant programs.
- Continue to operate the County's Environmental Service Centers (ESC). The ESCs, located countywide, provide information, materials, and resources to constituents about a range of County-sponsored (and non-County sponsored) sustainability and environmental programs. There are several permanent ESCs staffed by trained County and contract personnel, as well as literature racks with resources for the public, and other resources.
- Continue to implement sustainable affordable multifamily housing through the Affordable Multifamily Rental Housing Program.

## BE-2. Energy Efficiency Programs

**Action Goal:** Conduct energy efficiency retrofits for at least 25% of existing commercial buildings over 50,000 square feet and at least 5% of existing single-family residential buildings. Promote innovative, low-interest financing for energy efficiency projects for existing development. Create energy conservation campaigns and partner with utilities and other entities on energy efficiency.

**Lead (Supporting) Entity:** LA County Internal Services Department (LA County Department of Regional Planning).

**Action Status:** GHG emissions benefits have been quantified and counted toward attainment of the County's CCAP target based on the metrics identified in the action goal.

**Additional Information:** Retrofits will target lighting, heating and air conditioning units, and overall building energy use. The residential building retrofits will expand upon the Energy Upgrade California in Los Angeles County<sup>1</sup> and utilize a *whole home* approach, which typically reduces

<sup>1</sup> Currently few, if any, jurisdictions in the United States are achieving more than 2% penetration on home performance programs.

electricity consumption by 25–35%.<sup>2</sup> Likewise, the energy efficiency financing will expand on the Los Angeles Commercial Building Performance Partnership and will include financing for heating, ventilation, air conditioning, lighting, water heating equipment, insulation, and weatherization.

**Approaches:** The following strategies may be used to help achieve the action goals and support implementation.

#### *Commercial Retrofit Strategies*

- Expand savings of Southern California Edison’s (SCE’s) direct install program by 10%.<sup>3</sup>
- Promote individualized energy management services for large energy users.
- Partner with SCE to leverage the Savings by Design incentive program for commercial projects. Savings by Design incentive requires 10% better than Title 24 standards in order to qualify; up to \$500,000 in performance rebates are available.
- Launch energy efficiency campaigns targeted at business (e.g., Chicago Green Office Challenge). Provide public education on the need for energy efficiency and emissions reduction programs and incentives.
- Utilize the energy efficiency ratings disclosed through Assembly Bill (AB) 1103 to target assistance programs on high use buildings based on energy use per square foot. Encourage building owners to upload their ratings to Portfolio Manager so they will be easily accessible to the general public.

#### *Residential Retrofit Strategies*

- Partner with SCE to implement and expand their residential rebate programs for energy efficiency upgrades.
- Implement a low-income weatherization program.
- Create a rental home inspection program as a vehicle to promote energy efficiency improvements in rental units. Require minimum levels of insulation, maximum levels of envelope and duct leakage, and other selected improvements at time of sale. Review existing County policies to identify potential barriers to green building techniques and determine appropriate updates and revisions as needed.
- Assign key staff members who understand the latest green technologies to serve as points of contact for energy efficiency improvement projects.
- Increase participation of SCE’s multifamily energy efficiency program to 25% by 2020.<sup>4</sup>
- Continue to implement multifamily home retrofits through the Affordable Multifamily Rental Housing Program and Home Improvement Program. Consider modifications to the Home Ownership Program to incorporate energy retrofits.<sup>5</sup>

<sup>2</sup> This is a typical range for home performance programs currently. Given LA’s climate more drastic reductions might not be feasible. San Francisco is achieving about 35% energy reduction per home with its home performance program.

<sup>3</sup> The direct install program helps businesses save money and reduce energy through free energy efficiency evaluations. SCE reported average savings of about 3% for the 2006–2008 program cycle.

<sup>4</sup> Participation rate as of 2008 was 12%, most recent year that data is available.

<sup>5</sup> The GHG calculations for this action include reductions for 560 public housing units, 180 affordable multifamily rental housing units, 999 Community Development Commission (CDC) affordable housing units, and 490 home improvement program units (assumes resources are available).

*Energy Financing Strategies*

- Increase funding to non-low-income homeowners who participate in Energy Upgrade California to cover 25% of the cost of a whole house retrofit.<sup>6</sup>
- Provide grants to low-income homeowners who participate in Energy Upgrade California to cover 100% of costs of a whole house retrofit.
- Expand the amount of Property Assessed Clean Energy (PACE) available in LA County. In PACE financing, money is made available to commercial property owners for energy efficiency improvements that can then be paid back via the property tax bill PACE may also be possible for residential applications using the approach being used by the Western Riverside Council of Governments (WRCOG) and the San Bernardino Associated Governments (SANBAG).
- Remove funding barriers for energy efficiency improvements. For example, leverage federal tax credits or local rebates, such as those offered by SCE. Provide innovative, low-interest financing for energy efficiency and alternative energy projects. Fund incentives to encourage the use of energy-efficient equipment and lighting. Provide financial incentives for adoption of identified efficiency actions.

*Energy Coordination Strategies*

- Develop a program to drive real estate professionals toward the Energy Upgrade California Certified Green Real Estate Professional program for training.<sup>7</sup>
- Expand on efforts to drive participation in the GreenPoint Rated labeling program.<sup>8</sup>
- Coordinate with local governments, special districts, nonprofits, and other public organizations to share resources, achieve economies of scale, and develop policies and programs that are optimized on a regional scale. The County will continue to adhere to the LA County Regional Collaborative (LARC) charter, demonstrating their commitment to regional climate action and sustainability.

**BE-3. Solar Installations**

**Action Goal:** Promote and incentivize solar installations for new and existing homes, commercial buildings, carports and parking areas, water heaters, and warehouses.

**Lead (Supporting) Entity:** LA County Department of Regional Planning (LA County Internal Services Department, LA County Department of Public Works).

**Action Status:** GHG emissions benefits have been quantified and counted toward attainment of the County's CCAP target based on the metrics identified in the action goal.

**Additional Information:** This action includes development of incentives to expand solar water heating.

<sup>6</sup> "Experience with a variety of energy efficiency programs suggests that the average public contribution to efficiency investments for homeowners who are not low-income needs to be at least 25% to achieve savings on the order of 20%–35%. For low income households, it will usually be necessary to pay for all of the up-front investment." Source: Neme, Gottstein, and Hamilton. 2011. Residential Efficiency Retrofits: A Roadmap for the Future.

<sup>7</sup> Energy Upgrade California's Certified Green Real Estate Professional course prepares real estate professionals to help customers buy and sell existing green homes.

<sup>8</sup> The GreenPoint Rated label provides a mark of quality for green home upgrades and is a system that awards points for energy-efficient homes as well as other green building attributes.

**Approaches:** The following strategies may be used to help achieve the action goal and support implementation.

- Develop a partnership with SCE and Los Angeles Department of Water and Power (LADWP) to explore possibilities for solar energy production for existing development.
- Promote innovative, low-interest financing for residential and commercial renewable energy, such as PACE financing.
- Adopt the Renewable Energy Ordinance that outlines development guidelines for solar installation.
- Continue to identify and remove regulatory or procedural barriers to producing renewable energy in building and development codes, design guidelines, and zoning ordinances.

## **BE-4. Alternative Renewable Energy Programs**

**Action Goal:** Implement pilot projects for currently feasible wind, geothermal, and other forms of alternative renewable energy.<sup>9</sup>

**Lead (Supporting) Entity:** LA County Internal Services Department (LA County Department of Regional Planning, LA County Department of Public Works).

**Action Status:** GHG emissions reductions have not been quantified or counted toward attainment of the County's CCAP target. Inclusion of GHG benefits achieved by BE-4 in future CCAP updates is contingent on project implementation and the development of metrics to track emissions reductions.

**Additional Information:** This action complements *BE-3: Solar Installations* by supporting other forms of renewable energy (e.g., wind). Diversifying the County's electricity portfolio will improve the flexibility and resiliency of power delivery.

**Approaches:** The following strategies may be used to help achieve the action goal and support implementation.

- Collaborate with LADWP to develop an Alternative Energy Development Plan to identify the allowable and appropriate alternative energy facility types in the county.
- Adopt the Renewable Energy Ordinance to support new renewable energy technologies.

## **BE-5. Wastewater Treatment Plant Biogas**

**Action Goal:** Encourage renewable biogas projects.

**Lead (Supporting) Entity:** All Operators of Wastewater Treatment Facilities.

**Action Status:** GHG emissions reductions have not been quantified or counted towards attainment of the County's CCAP target. Inclusion of GHG benefits achieved by BE-5 in future CCAP updates is

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<sup>9</sup> Potential future forms of non-GHG energy could include nuclear fusion, which is being researched by many parties, including the Lockheed Martin Skunk Works in Palmdale, but which has not yet been experimentally proven as a viable commercial energy source. As new technologies become proven, the County will consider how they can support further development and deployment of such technologies.

contingent on project implementation and the development of metrics to track emissions reductions.

**Additional Information:** Various rules and regulations require wastewater treatment plant operators to capture the biogas generated from the treatment of wastewater. The captured methane is routinely used to offset non-renewable energy use by installing biogas to energy projects when economically feasible. The Sanitation Districts also operate a 35 megawatt biogas turbine combined cycle power generating facility at the Joint Water Pollution Control Plant. The system provides 95% of plant power needs, reducing GHG emissions and savings close to \$20 million per year in electricity costs.

**Approaches:** The County should partner with the owners and operators of wastewater treatment plants to identify incentives to further encourage renewable biogas projects.

## **BE-6. Encourage Energy Efficiency Retrofits of Wastewater Equipment**

**Action Goal:** Encourage the upgrade and replacement of wastewater treatment and pumping equipment.

**Lead (Supporting) Entity:** All Operators of Wastewater Treatment Facilities.

**Action Status:** GHG emissions reductions have not been quantified or counted towards attainment of the County's CCAP target. Inclusion of GHG benefits achieved by BE-6 in future CCAP updates is contingent on project implementation and the development of metrics to track emissions reductions.

**Additional Information:** Replacement of equipment slated for retirement with more energy-efficient equipment, as well as utilization of best management practices will reduce equipment energy consumption. Wastewater treatment facilities throughout the LA County region are actively engaged in pursuing energy efficiency projects at regional wastewater treatment facilities. Implementation of BE-6 will continue and potentially expand existing efforts, further reducing GHG emissions associated with wastewater processing and treatment.

**Approaches:** The following strategies may be used to help achieve the action goal and support implementation.

- Partner with facility operators to identify equipment slated for retirement.
- Develop a best management practices checklist for reducing equipment energy consumption.

## **BE-7. Landfill Biogas**

**Action Goal:** Partner with the owners and operators of landfills with at least 250,000 tons of waste-in-place to identify incentives to capture and clean landfill gas to beneficially use the biogas to generate electricity, produce biofuels, or otherwise offset natural gas or other fossil fuels.

**Lead (Supporting) Entity:** All Operators of Landfill Facilities

**Action Status:** Implementation may be at the discretion of the landfill owners or other agencies, such as the Department of Regional Planning, which issues conditional use permits for private landfills in the unincorporated County areas. GHG emissions reductions have not been quantified or counted towards attainment of the County's CCAP target. Inclusion of GHG benefits achieved by BE-7 in

future CCAP updates is contingent on project implementation and the development of metrics to track emissions reductions.

**Additional Information:** Currently, all landfills serving the unincorporated County with at least 250,000 tons of waste-in-place have installed methane capture systems. Methane captured by these systems can be used to generate electricity. For example, Puente Hills Landfill Gas-to-Energy Facility provides enough electricity to power about 70,000 homes in the County. Similar facilities have also been implemented by the Sanitation Districts at the Calabasas Landfill and Spadra Landfill. Additionally, a gas-to-energy facility is operational at the Chiquita Canyon Landfill, and construction of such a facility is underway at the Sunshine Canyon Landfill. Implementation of BE-7 would accelerate gas-to-energy facilities at landfills throughout LA County.

**Approaches:** The following strategies may be used to help achieve the action goal and support implementation.

- Identify incentives for landfill biogas projects.
- Identify partners and potential landfill biogas projects.

## Land Use and Transportation

### LUT-1. Bicycle Programs and Supporting Facilities

**Action Goal:** Construct and improve bicycle infrastructure to increase biking and bicyclist access to transit and transit stations/hubs. Increase bicycle parking and “end-of-trip” facilities offered through the unincorporated County.

**Co-Lead (Supporting) Entity:** LA County Department of Public Works, Department of Public Health and Department of Regional Planning (other County Departments).

**Action Status:** GHG emissions benefits have been quantified and counted toward attainment of the County’s CCAP target based on the metrics identified in the action goal and the approaches.

**Additional Information:** This action quantifies GHG reductions anticipated in 2020 as a result of implementation of the *Los Angeles County 2012 Bicycle Master Plan* (2012 Bicycle Master Plan), which would result in a reduction of vehicle miles travelled. The 2012 Bicycle Master Plan is a sub-element of the Transportation Element of the General Plan; it replaces the 1975 Plan of Bikeways. The 2012 Bicycle Master Plan will result in various bicycle-friendly policies and programs and proposes implementation of approximately 831 miles of new bikeways throughout the County through 2032.

**Approaches:** The following strategies may be used to help achieve the action goal and support implementation.

- Implement select programs of the 2012 Bicycle Master Plan.
- Work with transit station/hub property owners, private property owners/development and County facility managers on opportunities to provide “end-of-trip” facilities for bicycle riders, including showers, secure bicycle lockers, and changing spaces, as outlined in the County’s Healthy Design Ordinance.

- Promote interdepartmental collaboration between Public Works and Parks and Recreation to increase bike access to public facilities, such as parks and libraries.
- Consider expanding existing and providing new bicycle facilities near parks.
- Identify gaps and deficiencies in the active transportation network and implement active transportation projects to address these deficiencies (approach will also support implementation of *LUT-2: Pedestrian Network* and *LUT-3: Transit Expansion*).
- Plan and implement infrastructure improvements to promote bicyclist “first mile—last mile” access to and from transit station/hub origin and destination points.
- Develop measures and practices to determine: 1) the degree to which unincorporated area residents have access to transit, bicycle and pedestrian network; and 2) the usage of those networks (approach will also support implementation of *LUT-2: Pedestrian Network* and *LUT-3: Transit Expansion*). Priority should be given to locations near schools, transit centers, parks, and bike and pedestrian priority routes.

## LUT-2. Pedestrian Network

**Action Goal:** Construct and improve pedestrian infrastructure to increase walking and pedestrian access to transit and transit stations/hubs. Program the construction of pedestrian projects toward the goal of completing 15,000 linear feet of new pedestrian improvements/amenities per year.

**Co-Lead (Supporting) Entity:** LA County Department of Public Works, Department of Public Health and Department of Regional Planning (LA County Internal Services Division).

**Action Status:** GHG emissions benefits have been quantified and counted toward attainment of the County’s CCAP target based on the metrics identified in the action goal and the approaches.

**Additional Information:** This action quantifies GHG reductions anticipated in 2020 as a result of implementation of the 2012 Bicycle Master Plan, which would result in a reduction of vehicle miles travelled. This action includes construction of new pedestrian infrastructure and improvements to facilities for pedestrians, consistent with the projects described in the 2012 Bicycle Master Plan. Actions to minimize pedestrian barriers and provision of traffic calming measures are also considered, consistent with the County’s Healthy Design Ordinance and Transit-Oriented District station area plans.

**Approaches:** The following strategies may be used to help achieve the action goal and support implementation.

- Develop active transportation networks for Transit-Oriented District station area plans that will promote livability. The plans should provide a transit, bicycle and pedestrian access network that internally links all uses and connects to all existing or planned external streets contiguous with the project site. The plans will eliminate or minimize barriers to active transportation access and interconnectivity such as walls, landscaping, and slopes.
- Plan and implement infrastructure improvements to promote pedestrian “first mile—last mile” access to and from transit station/hub origin and destination points.
- Provide traffic calming measures. Traffic calming features may include: marked crosswalks, count-down signal timers, curb extensions, speed tables, raised crosswalks, raised intersections,

median islands, tight corner radii, roundabouts or mini-circles, on-street parking, planter strips with street trees, chicanes/ chokers, and others.

- Promote interdepartmental collaboration between Regional Planning, Public Works, and Parks and Recreation to increase non-motorized access to public facilities such as parks, libraries, and trails.
- Implement policies to minimize conflicts between pedestrians and motorists. Identify intersections where large numbers of pedestrian/vehicle collisions are occurring in unincorporated areas and consider changes to increase pedestrian safety.

### LUT-3. Transit Expansion

Action Goal: Collaborate with Los Angeles County Metropolitan Transportation Authority (LA Metro) on a transit program that prioritizes transit by creating bus priority lanes, improving transit facilities, reducing transit-passenger time, and providing bicycle parking near transit stations.

Lead (Supporting) Entity: LA County Department of Public Works (LA County Department of Regional Planning).

Action Status: GHG emissions benefits have been quantified and counted toward attainment of the County's CCAP target based on the metrics identified in the action goal and the approaches.

Additional Information: This action quantifies GHG reductions anticipated in 2020 from increased use of transit, which would reduce vehicle miles travelled.

Approaches: The following strategies may be used to help achieve the action goal and support implementation.

- Work with LA Metro on a transit program that prioritizes transit throughput over car throughput, and creates bus priority lanes. Improve transit facilities through sidewalk/ crosswalk safety enhancements and bus shelter improvements. Reduce transit-passenger travel time through more reduced headways and increased speed and reliability. Work with transit station/hub property owners to provide short-term and long-term bicycle parking near rail stations, transit stops, and freeway access points.
- Plan and implement local community transit and shuttle services that provide efficient connections to regional transit facilities. The local shuttles will provide service to transit hubs, commercial centers, and residential areas and connections to regional transit lines.
- Plan and implement infrastructure improvements to promote bicycle and pedestrian "first mile—last mile" access to and from transit station/hub origin and destination points.

### LUT-4. Travel Demand Management

Action Goal: Encourage ride- and bike-sharing programs and employer-sponsored vanpools and shuttles. Implement marketing strategies to publicize these programs and reduce commute trips.

Lead (Supporting) Entity: CEO Office of Workplace Programs (All County Departments).

Action Status: GHG emissions benefits have been quantified and counted toward attainment of the County's CCAP target based on the metrics identified in the action goal and the approaches.

**Additional Information:** This action quantifies GHG reductions anticipated in 2020 from reductions in vehicle miles travelled (fewer trips).

**Approaches:** The following strategies may be used to help achieve the action goal and support implementation.

- Encourage ride-sharing programs and a permanent transportation management association membership and funding requirement. Funding may be provided by a Community Facilities District, County Service Area, or other non-revocable funding mechanism.
- Encourage market-based bicycle sharing programs that support bicycle use around and between transit stations/hubs.
- Implement marketing strategies to reduce commute trips. Information sharing and marketing are important components to successful commute-trip reduction strategies.
- Encourage employer-sponsored vanpools or shuttles. A vanpool will usually service employees' commute to work while a shuttle will service nearby transit. Employer-sponsored vanpool programs entail an employer purchasing or leasing vans for employee use, and often subsidizing the cost of at least program administration, if not more.

## LUT-5. Car-Sharing Program

**Action Goal:** Implement a car-sharing program to allow people to have on-demand access to a shared fleet of vehicles on an as-needed basis.

**Lead (Supporting) Entity:** CEO Office of Workplace Programs (All County Departments).

**Action Status:** GHG emissions benefits have been quantified and counted toward attainment of the County's CCAP target based on the metrics identified in the action goal and the approaches.

**Additional Information:** User costs are typically determined through mileage or hourly rates, with deposits and/or annual membership fees. The car-sharing program could be created through a local partnership or through one of many existing car-share companies. Car-sharing programs may be grouped into three general categories: residential-based, employer-based, or transit station-based. All vehicles would be owned by residents or public/private entities (e.g., employers) other than the County. This action quantifies GHG reductions anticipated in 2020 from reductions in vehicle miles travelled (fewer trips).

**Approaches:** The following strategies may be used to help achieve the action goal and support implementation.

- Residential-based programs that can work to substitute entire household based trips. These private car-sharing programs can be used for everyday trips throughout the unincorporated County. The County will investigate opportunities for private car-sharing companies to store their vehicles on the street or in public garages for a fee, which can help reduce operating costs, increase visibility, and provide easy and convenient public access to the shared vehicles.
- Employer-based programs that provide a means for business/day trips for alternative mode commuters and provide a guaranteed ride home option. The County will explore incentives to encourage employer-based programs, including allowing developers and building owners to replace required parking for spots with spots store shared vehicles.

- Transit station-based programs that focus on providing the *last-mile* solution and link transit with commuters' final destinations.

## LUT-6. Land Use Design and Density

Action Goal: Promote sustainability in land use design, including diversity of urban and suburban developments.

Lead (Supporting) Entity: LA County Department of Regional Planning (LA County Department of Public Works).

Action Status: GHG emissions benefits have been quantified and counted toward attainment of the County's CCAP target based on the metrics identified in the action goal and the approaches.

Additional Information: This action quantifies GHG reductions anticipated in 2020 from reductions in vehicle miles travelled (fewer trips). This action includes approaches that encourage transit oriented districts (TODs), infill development, pedestrian-friendly and community-serving uses near transit stops, and increased transit use (as proposed in the General Plan).

Approaches: The following strategy could be used to help achieve the action goal and support implementation.

- Implement the County's Transit Oriented District Program and Healthy Design Ordinance.

## LUT-7. Transportation Signal Synchronization Program

Action Goal: Improve the network of traffic signals on the major streets throughout LA County.

Lead (Supporting) Entity: LA County Department of Public Works.

Action Status: GHG emissions benefits have been quantified and counted toward attainment of the County's CCAP target based on anticipated emissions reductions achieved through implementation of the Transportation Signal Synchronization Program (TSSP).

Additional Information: The TSSP implements innovative, low-cost operational improvements to the network of traffic signals on the major streets throughout LA County. Upgrading traffic signals improves mobility on congested roadways and reduces GHG emissions through reduced vehicle idle time. The County will continue implementation of its TSSP with a goal of completing 38 additional routes (16 new and 22 to be redone) between 2010 and 2020.

Approaches: The following strategy could be used to help achieve the action goal and support implementation.

- Continue to implement projects for signal improvements.
- Identify additional funding opportunities to expand project implementation.

## LUT-8. Electric Vehicle Infrastructure

Action Goal: Install 500 electric vehicle (EV) charging facilities at County-owned public venues (e.g., hospitals, beaches, stand-alone parking facilities, cultural institutions, and other facilities) and ensure that at least one-third of these charging stations will be available for visitor use. Expanding

the number of EV charging opportunities for the public will help the County meet and exceed future projections for anticipated plug-in electric vehicle (PEV) registrations.<sup>10</sup>

Lead (Supporting) Entity: LA County Internal Services Department (LA County Department of Public Works, LA County Department of Regional Planning).

Action Status: GHG emissions benefits have been quantified and counted toward attainment of the County's CCAP target.

Additional Information: Plug-in hybrid electric vehicles and other low-emission vehicles reduce air pollution, decrease dependency on fossil fuels, and support green businesses.

Approaches: The following strategies may be used to help achieve the action goal and support implementation.

- Streamline the County's permitting and inspection process for EV retrofits.
- Revise the Title 22 zoning ordinance to allow EV charging as a use by-right or with a permit as appropriate.

## LUT-9. Idling Reduction Goal

Action Goal: Encourage idling limits of 3 minutes for heavy-duty construction equipment, as feasible within manufacturer's specifications.

Lead (Supporting) Entity: LA County Department of Regional Planning (LA County Department of Public Works, LA County Department of Public Health).

Action Status: GHG emissions benefits have been quantified and counted toward attainment of the County's CCAP target based on the metrics identified in the action goal.

Additional Information: The current idling limit adopted by the California Air Resources Board (CARB) and local air district regulations is 5 minutes. This action will promote an idling limit of 3 minutes and encourage contractors to submit a construction vehicle management plan that includes the following information: idling time goals; requiring hour meters on equipment; and documenting the serial number, horsepower, age, and fuel of all onsite equipment.

Approaches: The following strategies may be used to help achieve the action goal and support implementation.

- Initiate development of an idling ordinance or policy that outlines goals for reduced equipment idling.
- Develop an outreach and education program.

## LUT-10. Efficient Goods Movement

Action Goal: Support regional efforts to maximize the efficiency of the goods movement system throughout the unincorporated areas.

<sup>10</sup> SCAG's PEV Atlas estimates 300,000 cumulative PEV registrations in LA County (incorporated and unincorporated areas) by 2020.

**Lead (Supporting) Entity:** LA County Department of Public Works (LA County Department of Regional Planning).

**Action Status:** Implementation of specific goods movement efficiency measures is at the discretion of regional transportation agencies (e.g., Southern California Association of Governments [SCAG]). LA County will support action implementation and provide permitting assistance as needed. Given the County's supporting role in this measure, GHG emissions reductions have not been quantified or counted toward attainment of the County's CCAP target. Inclusion of GHG benefits achieved by LUT-10 in future CCAP updates is contingent on project implementation and the development of metrics to track emissions reductions.

**Additional Information:** Goods are distributed to County residents and businesses through freight, rail, and air. Improving the efficiency of goods movement will not only reduce GHG emissions and environmental impacts, but also support economic competitiveness and local job creation. SCAG has adopted an efficient goods movement strategy as part of their Final 2012 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) to achieve these environmental and economic goals. SCAG's strategy outlines policies to develop a coordinated Southern California goods movement system that accommodates growth and freight throughput in the region. CCAP action LUT-10 will support implementation of SCAG's strategy in the unincorporated County.

**Approaches:** The following strategies may be used to help achieve the action goal and support implementation.

- Support efforts to evaluate zero and/or near-zero emission freight corridors.
- Work with appropriate agencies and partners to identify and replace at-grade railroad crossings to reduce freight delay and vehicle idling.

## **LUT-11. Sustainable Pavements Program**

**Action Goal:** Reduce energy consumption and waste generation associated with pavement maintenance and rehabilitation.

**Lead (Supporting) Entity:** LA County Department of Public Works.

**Action Status:** GHG emissions reductions have not been quantified or counted toward attainment of the County's CCAP target. Inclusion of GHG benefits achieved by LUT-11 in future CCAP updates is contingent on project implementation and the development of metrics to track emissions reductions.

**Additional Information:** The Sustainable Pavements Program maintains and rehabilitates aging roadways throughout the County. The program utilizes a three-pronged sustainable approach where 1) roads in good condition are actively maintained, 2) recycled materials are used in treatment selections, and 3) existing materials are reutilized for reconstruction projects. These actions reduce GHG emissions through vehicle fuel savings and materials reduction. CCAP action LUT-11 will continue implementation of the sustainable pavements program.

**Approaches:** The following strategies may be used to help achieve the action goal and support implementation.

- Identify potential projects for pavement improvements.
- Identify additional funding opportunities to expand project implementation.

- Investigate opportunities to use new materials that are more effective or achieve cost savings.
- Investigate opportunities to use cool or porous pavements, as feasible, to reduce urban heat island effect and conserve water.

## **LUT-12. Electrify Construction and Landscaping Equipment**

**Action Goal:** Utilize electric equipment wherever feasible for construction projects. Reduce the use of gas-powered landscaping equipment.

**Lead (Supporting) Entity:** LA County Department of Public Works (LA County Department of Regional Planning, LA County Department of Parks and Recreation, Beaches and Harbors).

**Action Status:** GHG emissions reductions have not been quantified or counted toward attainment of the County's CCAP target. Inclusion of GHG benefits achieved by LUT-12 in future CCAP updates is contingent on project implementation and the development of metrics to track emissions reductions.

**Additional Information:** Electric equipment goals for construction equipment will be encouraged for new development projects in the County. The County may also work with construction contractors to determine the components of their fleets. Cross-jurisdiction coordination (e.g., with the South Coast Air Quality Management District) will be pursued to support increased use of electric landscaping equipment.

**Approaches:** The following strategies may be used to help achieve the action goal and support implementation.

- Encourage new development to include electrical outlets on the exterior of buildings, which must be accessible so that the electric landscaping equipment can be charged.
- Implement incentive programs, such as a rebate for purchasing electric lawnmowers or other electric equipment.
- Continue to implement a lawnmower exchange program.

## **Water Conservation and Wastewater**

### **WAW-1. Per Capita Water Use Reduction Goal**

**Action Goal:** Meet the State established per capita water use reduction goal<sup>11</sup> as identified by Senate Bill (SB) X7-7 for 2020.

**Lead (Supporting) Entity:** LA County Department of Public Works (Local Water Agencies, LA County Department of Regional Planning, LA County Internal Services Department).

**Action Status:** GHG emissions benefits have been quantified and counted toward attainment of the County's CCAP target based on the metrics identified in the action goal.

<sup>11</sup> The State goal is a 20% reduction in per capita water use compared to baseline levels.

**Additional Information:** This action will reduce embodied energy use associated with water conveyance and treatment, along with fugitive emissions associated with wastewater treatment processes resulting from treatment of wastewater generated within unincorporated county borders. Specific per capita water use reduction goals vary by water agency (e.g., Walnut Valley Water District) and range from 5 to 20% below baseline values.

**Approaches:** The following strategies may be used to help achieve the action goal and support implementation.

- Promote water audit programs in collaboration with efforts by local water purveyors that offer free water audits to single-family, multifamily, large landscape accounts, and commercial customers. Collaborate with purveyors to enact programs to install ultra-low-flush toilets in facilities and other conservation programs for commercial, industrial, and institutional (CII) accounts
- Support local water agencies in promoting use of water-efficient appliances, plumbing and irrigation systems, and aggressive water savings targets.
- Expand upon the County's Drought-Tolerant Landscaping Ordinance and the State's Model Water Efficiency Landscape Ordinance (MWELO), which currently require the reduction of outdoor potable water use by 70% of the evapotranspiration rate for projects with landscaping of greater than 2,500 square-feet. Additional water reductions can be achieved by promoting underground irrigation techniques, requiring timing limits for watering, and requiring water-efficient irrigation equipment.
- Support requirements for water efficiency upgrades in the renovation or expansion of existing buildings.
- Promote incentive programs for projects that demonstrate significant water conservation through use of innovative water consumption technologies.
- Collaborate in sponsoring water efficiency training and certification for irrigation designers and installers and property managers.
- Expand upon the Smart Gardening campaign by providing more public education and outreach to promote the use of drought-tolerant and slow-growing plants to reduce green waste generation while encouraging water conservation. The Smart Gardening campaign will highlight specific water-wasting activities to discourage, such as the watering of non-vegetated surfaces and using water to clean sidewalks and driveways, as well as educate the community about the importance of water conserving techniques.

## **WAW-2. Recycled Water Use, Water Supply Improvement Programs, and Stormwater Runoff**

**Action Goal:** Promote the use of wastewater and gray water to be used for agricultural, industrial, and irrigation purposes consistent with the appropriate provisions of Title 22 and approval of the California Department of Health Services. Manage stormwater, reduce potential treatment, and protect local groundwater supplies.

Lead (Supporting) Entity: LA County Department of Public Works (LA County Department of Parks and Recreation, LA County Department of Regional Planning, LA County Internal Services Department).<sup>12</sup>

Action Status: GHG emissions reductions achieved by the following LA County Department of Parks and Recreation recycled water projects have been quantified.

- Rimgrove recycled water project.
- Pathfinder recycled water project.

GHG reductions of larger efforts to promote the use of wastewater and gray water have not been quantified or counted toward attainment of the County's CCAP target. Inclusion of additional GHG benefits achieved by WAW-2 in future CCAP updates is contingent on project implementation and the development of metrics to track emissions reductions. Reduction of potable water use, either by conservation or replacement with recycled water, obviates the need to import similar water quantities through the State Water Project. On average, a million gallons of water imported into the unincorporated Los Angeles area requires approximately 7,222 kWh of electricity. At a future 2020 GHG production of 0.63 pound per kWh,<sup>13</sup> a million gallons of avoided pumping reduces GHG emissions by 4,526 pounds of CO<sub>2</sub> equivalent.

Additional Information: The current Low Impact Development (LID) Ordinance also requires stormwater management strategies, which include onsite infiltration/retention, use of rain barrels, runoff management, as well as:

- Mimic undeveloped stormwater runoff rates and volumes.
- Prevent pollutants of concern from leaving the development site in stormwater.
- Minimize hydromodification impacts on natural drainage systems.
- Non-Designated<sup>14</sup> residential projects of less than five units must implement at least two LID best management practices, such as disconnecting impervious surfaces, using porous pavement, downspout routing, installing a dry well, smart landscaping and irrigation requirements, or a green roof.
- Non-Designated<sup>18</sup>, residential projects of five units or more, Non-Designated<sup>18</sup>, Non-Residential projects, and Designated<sup>15</sup> projects must comply with infiltration and runoff management requirements.

<sup>12</sup> WAW-2 includes a number of discrete activities related to recycled water use. As such, the implementing entities will have distinct responsibilities, consistent with their department goals. DPW will be responsible for long-range recycled water planning and infrastructure development. DPR will coordinate internal recycled water projects, including the Rimgrove and Pathfinder projects. DPR will encourage the use of recycled water on private properties. The Los Angeles County Internal Services Department (ISD) can provide a support role for the water recycling aspect of Action Goal WAW-2. Currently, ISD handles planning and implementation of recycled water projects for County facilities (excluding spreading grounds) and has the expertise in this sector. The four departments will collaborate to ensure the action goal is achieved and all components of the action are implemented.

<sup>13</sup> Production rate assumes 33% of the State's electricity in 2020 will be provided by renewable energy. Carbon intensity assumes the San Onofre Nuclear Generation Station (SONGS) is replaced by natural gas (refer to Appendix B for additional information).

<sup>14</sup> Non-Designated projects are defined in Los Angeles County Code Section 12.84.430B.

<sup>15</sup> Designated projects are defined in Los Angeles County Code Section 12.84.430A.

**Approaches:** The following strategies may be used to help achieve the action goal and support implementation. Requirements of WAW-2 will be adopted as part of the County' LID Ordinance. New LID practices should be coordinated with the Los Angeles Regional Water Quality Control Board and support projects that are consistent with regional efforts to reduce stormwater runoff (pursuant to MS4 Permit Order).

- Coordinate with water agencies to implement and support groundwater development management plans.
- Inventory potential non-potable uses of water for potential substitution by recycled and/or gray water. Prioritize infrastructure projects identified in the Department of Parks and Recreation's Recycled Water Master Plan.
- Encourage the retrofit of irrigation systems to promote the use of recycled water at golf courses, parks and open spaces owned and operated by other entities, and take the lead in implementing these modifications at County-owned and operated greenbelt facilities.
- Encourage the retrofit of single-family and multi-family homes to promote the use of graywater for landscaping and irrigation.
- Continue to collaborate with responsible agencies to encourage the use of recycled water where cost and energy efficiencies for its production, distribution, and use are favorable.
- Participate in and support regional programs and projects that target the improvement and conservation of the region's groundwater and surface water supplies.
- Consider programs to collect stormwater for onsite reuse for landscape irrigation.
- Participate in and support regional programs and projects that target the improvement and conservation of the region's groundwater and surface water supplies.

## Waste Reduction, Reuse and Recycling

### SW-1. Waste Diversion Goal

**Action Goal:** For the County's unincorporated areas, adopt a waste diversion goal to comply with all state mandates to divert at least 75% of waste from landfill disposal by 2020.

**Lead (Supporting) Entity:** LA County Department of Public Works (LA County Department of Regional Planning).

**Action Status:** GHG emissions benefits have been quantified and counted toward attainment of the County's CCAP target based on the metrics identified in the action goal.

**Additional Information:** The County has established a comprehensive waste collection and recycling system that is designed to reduce the amount of trash that is sent to regional landfills. This system incorporates a variety of programs that collectively divert over 50% of the waste generated in the County. Implementation of SW-1 will increase the amount of diverted waste to at least 75%. The County will strive to achieve this goal by working to expand or establish composting, recycling, and yard waste programs made available to residences and businesses. Since waste generated in the unincorporated county is hauled by private waste services providers, the County's role will be to

work with the waste services providers to expand services and to support or organize education and outreach programs.

Approaches: The following strategies may be used to help achieve the action goal and support implementation.

- Exceed the waste diversion requirement set by AB 939 and incorporated into LA County Code Chapter 20.87 to ensure that a minimum of 70% of construction and building materials and demolition debris (C&D) are diverted from landfill disposal. Require contractors to submit a recycling and reuse plan (RRP) and use separate material bins at the construction site.
- Provide compost receptacles for food waste and other green waste.
- Implement an education program to educate county residents on the benefits of composting, what to compost, and how to compost.
- Promote financing mechanisms and opportunities to increase waste diversion. Funding mechanism could include State and federal grants, low-interest loans, self-funding, and revolving fund programs. PACE and Energy Upgrade California could also be expanded to include waste management and diversion funding.
- Expand upon the Clean LA Recycle Program and provide waste education and public outreach. The education program should include information on commercial and residential recycling, reuse, waste reduction, composting, grass cycling, and waste prevention. These materials should be available to the public at the County's ESCs.
- Encourage local recycling and composting initiatives at the neighborhood level.
- Encourage local businesses to expand their recycling and composting efforts and to reduce packaging of products manufactured in the unincorporated county.
- Enhance regional coordination on waste management practices, to take advantage of economies of scale of recycling, composting, and other diversion programs.
- Enhance material recovery programs at County-owned and operated solid waste facilities.
- Work with independent recyclers to encourage material recovery programs at privately owned solid waste facilities.
- Promote the development of alternative-to-landfill technology facilities, such as conversion technologies, capable of converting green waste, food waste, municipal solid waste residuals, or other organic materials into green energy, fuels, and other beneficial products. These technologies have the potential to lower GHG emissions, reduce reliance on landfills, reduce waste transportation, and increase the production of local renewable energy, green fuels, and other beneficial products.

## Land Conservation and Tree Planting

### LC-1. Develop Urban Forests

Action Goal: Support and expand urban forest programs within the unincorporated areas.

Lead (Supporting) Entity: LA County Fire (LA County Department of Regional Planning, LA County Department of Parks and Recreation).

**Action Status:** GHG emissions benefits have been quantified and counted toward attainment of the County's CCAP target based on the metrics identified in the action goal.

**Additional Information:** LA County Fire's Urban Forestry Programs distribute over 22,422 seedlings to unincorporated County residents and businesses each year. This action requires an evaluation of the feasibility of expanding tree planting in the unincorporated county, including evaluation of potential carbon sequestration from different tree species, potential reductions of building energy from shading, and GHG emissions associated with pumping water used for irrigation.

**Approaches:** The following strategies may be used to help achieve the action goal and support implementation:

- Conduct a tree inventory to identify tree-deficient neighborhoods. Target these areas for tree distribution and planting.
- Consider planting a portion of trees along pedestrian and bike route. Although these trees will not contribute to building energy reductions, they will provide shade and enhanced aesthetics that may encourage pedestrian and biking activities.
- Support implementation of the tree planting requirements for new developments, consistent with the County's Green Building Ordinance.
- Prioritize drought-tolerant, native, and non-flammable trees to support water conservation efforts, minimize the spread of invasive species, and reduce fire risk.

## **LC-2. Create New Vegetated Open Space**

**Action Goal:** Restore and revegetate previously disturbed land and/or unused urban and suburban areas.

**Lead (Supporting) Entity:** LA County Fire (LA County Department of Regional Planning, LA County Department of Parks and Recreation, LA County Department of Public Works).

**Action Status:** GHG emissions reductions have not been quantified or counted toward attainment of the County's CCAP target. Inclusion of GHG benefits achieved by LC-2 in future CCAP updates is contingent on project implementation and the development of metrics to track emissions reductions.

**Additional Information:** LA County has been dedicated to resource conservation and expansion of open space for decades. This action builds on existing initiatives and encourages the restoration and revegetation of previously disturbed land in order to promote carbon sequestration in the unincorporated county. It also promotes the conversion of unused urban and suburban areas to parks and forests.

**Approaches:** The following strategies may be used to help achieve the action goal and support implementation.

- Prioritize creation of contiguous habitat to support species migration and overall ecosystem stability and resiliency in addition to GHG benefits.
- Offer incentives for voluntary creation of open space on private property.
- Provide funding for landowners to purchase conservation easements.
- Quantify the economic and environmental benefits of newly created open space.

- Coordinate with local restoration banks to explore opportunities to support both carbon offsets and active restoration of ecological resources and habitats.
- Prioritize drought-tolerant native plantings to support water conservation efforts and minimize the spread of invasive species. Planting strategies to minimize fuel loading and reduce wildfire risk will also be prioritized.

### **LC-3. Promote the Sale of Locally Grown Foods and/or Products**

Action Goal: Establish local farmers markets and support locally grown food.

Lead (Supporting) Entity: LA County Department of Regional Planning (LA County Agricultural Commissioner, LA County Department of Public Health).

Action Status: GHG emissions reductions have not been quantified or counted toward attainment of the County's CCAP target. Inclusion of GHG benefits achieved by LC-3 in future CCAP updates is contingent on project implementation and the development of metrics to track emissions reductions. Successful farmer's markets have been established throughout LA County. This action would expand the number of markets within the unincorporated community. The sale of local food from organic farms in LA County will be prioritized, followed by products from surrounding agricultural areas (e.g., San Joaquin Valley, Ventura County).

Additional Information: Establishing local farmer's markets has the potential to provide community residents with a local source of food, protect local agricultural lands, and support local agricultural jobs. Co-benefits associated with locally grown foods include reduced vehicle miles traveled, as well as displaced carbon-intensive food production practices (if the food is grown organically).

Approaches: The County will expand the Healthy Design Ordinance to encourage and support farmers markets at community parks.

### **LC-4. Protect Conservation Areas**

Action Goal: Encourage the protection of existing land conservation areas.

Lead (Supporting) Entity: LA County Department of Regional Planning (LA County Department of Parks and Recreation, LA County Department of Public Works).

Action Status: GHG emissions reductions have not been quantified or counted toward attainment of the County's CCAP target. Inclusion of GHG benefits achieved by LC-4 in future CCAP updates is contingent on project implementation and the development of metrics to track emissions reductions.

Additional Information: Forested, oak woodland, hillsides, ridgelines, wetland areas, and some community parks and open spaces can provide carbon sink benefits by sequestering atmospheric CO<sub>2</sub>. Conservation areas can also provide a diverse suite of community benefits, including recreation, economic, and aesthetics. Accordingly, the County will prioritize these conservation areas that benefit multiple end uses.

Approaches: The following strategies may be used to help achieve the action goal and support implementation.

- Implement strategies recommended in the Oak Woodland Conservation Management Plan to preserve existing oak woodland and result in no net loss of oak woodland from existing value.
- Inventory environmental (e.g., CO<sub>2</sub> sequestration, endangered species habitat creation), economic (e.g., commodities), and public (e.g., recreation) benefits provided by conservation areas and land uses within the unincorporated County.
- Improve understanding and appreciation for natural areas through preservation programs and educational facilities.
- Protected areas should be managed to minimize the spread of invasive species.

## State Actions

### STATE-1. Renewables Portfolio Standard

State Program Goal: The Renewables Portfolio Standard (RPS) obligates investor-owned utilities (IOUs), energy service providers (ESPs), and Community Choice Aggregations (CCAs) to procure an additional 1% of retail sales per year from eligible renewable sources until 20% is reached, no later than 2010. Executive Order (EO) S-14-08 also sets forth a longer range target of procuring 33% of retail sales by 2020.

Additional Information: In the ongoing effort to codify the ambitious 33% by 2020 goal, SB X1-2 was signed by Governor Edmund G. Brown, Jr., in April 2011. This new RPS preempts CARB's 33% Renewable Electricity Standard and applies to all electricity retailers in the State including publicly owned utilities (POUs), IOUs, ESPs, and CCAs. All of these entities must adopt the new RPS goals of 20% of retail sales from renewables by the end of 2013, 25% by the end of 2016, and the 33% requirement by the end of 2020.

### STATE-2. Title 24: Standards for Commercial and Residential Buildings (Energy Efficiency and CALGREEN)

State Program Goal: Title 24 requires that building shells and building components be designed to conserve energy and water. CALGREEN mandatory and voluntary measures became effective on January 1, 2011, and the guidelines will be periodically updated.<sup>16</sup> The current energy efficiency standards in Title 24 were last adopted in 2008. The 2013 Title 24 energy efficiency standards will take effect in 2014 and are planned to be updated periodically afterward.

### STATE-3. Pavley/Advanced Clean Cars (Vehicle Efficiency) and Low Carbon Fuel Standard for On-road Transportation

State Program Goal: AB 1493 (Pavley) will reduce GHG emissions from automobiles and light duty trucks (2009 model years and newer) by 30% from 2002 levels by the year 2016. The Advanced Clean Car rules will further reduce GHG emissions from automobiles and light duty trucks for 2017–

<sup>16</sup> Implementation of the CALGREEN voluntary measures, which would exceed the mandatory efficiency standards, is encouraged for new development under BE-1, *Green Building Development*.

2025 vehicle model years. The State's vehicle efficiency standards have been harmonized with federal vehicle efficiency standards. The LCFS would reduce GHG emissions by requiring a low carbon intensity of transportation fuels sold in California by at least 10% by the year 2020. The regulation has been adopted.

#### **STATE-4.            Low Carbon Fuel Standard for Off-road Equipment and Vehicles**

State Program Goal: The low carbon fuel standard (LCFS) would reduce GHG emissions by requiring a low carbon intensity of transportation fuels sold in California by at least 10% by the year 2020. The regulation has been adopted.

#### **STATE-5.            California Cap-and-Trade Program**

State Program Goal: The California cap-and-trade program creates a market-based system with an overall emissions limit for affected sectors. The program is currently proposed to regulate more than 85% of California's emissions and will stagger compliance requirements according to the following schedule: (1) electricity generation and large industrial sources (2013); (2) fuel combustion and transportation (2015). The first auction occurred in late 2012 with the first compliance year in 2013.

## Appendix D

# Reduction Measure Comparison to General Plan Policies

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The Community Climate Action Plan (CCAP) is a component of the Air Quality Element of the General Plan. This appendix relates the CCAP actions to the policies outlined in the General Plan. Existing programs in the County that could be expanded or used to support individual actions are also identified.

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Proposed CCAP Measure		Measure Analysis	
Title	Goal	Relevant General Plan Policies (2035 General Plan)	Relevant Local Programs
Green Building and Energy			
BE-1. Green Building Development	Promote and incentivize at least Tier 1 voluntary standards within CALGREEN for all new residential and nonresidential buildings. Develop a heat island reduction plan and facilitate green building development by removing regulatory and procedural barriers.	<ul style="list-style-type: none"><li>• <b>Land Use:</b> LU 8.4, LU 10.1, LU 10.5</li><li>• <b>Air Quality:</b> AQ 1.1, AQ 3.4, AQ 3.5</li><li>• <b>Conservation and Natural Resources:</b> C/NR 12.2</li><li>• <b>Economic Development:</b> ED 2.4</li></ul>	<ul style="list-style-type: none"><li>• LA County Code, Title 31Southern California Edison (SCE) commercial and residential energy efficiency incentives</li><li>• LA Commercial Building Performance Partnership</li><li>• Energy Upgrade California for Los Angeles</li><li>• LA Commercial Building Performance Partnership</li><li>• SCE commercial and residential energy efficiency incentives</li><li>• Energy Upgrade California for Los Angeles</li></ul>
BE-2. Energy Efficiency Programs	Conduct energy efficiency retrofits for at least 25% of existing commercial buildings over 50,000 square feet and at least 5% of existing single-family residential buildings. Promote innovative, low-interest financing for energy efficiency projects for existing development. Create energy conservation campaigns and partner with utilities and other entities on energy efficiency.	<ul style="list-style-type: none"><li>• <b>Air Quality:</b> AQ 3.4</li><li>• <b>Economic Development:</b> ED 4.9</li></ul>	<ul style="list-style-type: none"><li>• SCE's California Solar Initiative</li><li>• LA County Renewable Energy Ordinance</li></ul>
BE-3. Solar Installations	Promote and incentivize solar installations for new and existing homes, commercial buildings, carports and parking areas, water heaters, and warehouses.	<ul style="list-style-type: none"><li>• <b>Air Quality:</b> AQ 1.1, AQ 3.4</li><li>• <b>Conservation and Natural Resources:</b> C/NR 12.1, C/NR 12.2</li><li>• <b>Public Services and Facilities:</b> PS/F 6.7</li><li>• <b>Economic Development:</b> ED 1.2, ED 2.4</li><li>• <b>Air Quality:</b> AQ 1.1, AQ 3.4</li><li>• <b>Conservation and Natural Resources:</b> C/NR 12.1, C/NR 12.2</li><li>• <b>Parks and Recreation:</b> P/R 6.2</li><li>• <b>Public Services and Facilities:</b> PS/F 6.5, PS/F 6.7</li><li>• <b>Economic Development:</b> ED 1.2, ED 2.4</li><li>• <b>Conservation and Natural Resources:</b> C/NR 12.1</li></ul>	<ul style="list-style-type: none"><li>• SCE Commercial Self Generation Incentive Program (SGIP).</li><li>• LA County Renewable Energy Ordinance</li></ul>
BE-4. Alternative Renewable Energy Programs	Implement pilot projects for wind, geothermal, and other currently viable forms of alternative renewable energy. <sup>1</sup>	<ul style="list-style-type: none"><li>• <b>Air Quality:</b> AQ 1.1, AQ 3.4</li><li>• <b>Conservation and Natural Resources:</b> C/NR 12.1, C/NR 12.2</li><li>• <b>Parks and Recreation:</b> P/R 6.2</li><li>• <b>Public Services and Facilities:</b> PS/F 6.5, PS/F 6.7</li><li>• <b>Economic Development:</b> ED 1.2, ED 2.4</li><li>• <b>Conservation and Natural Resources:</b> C/NR 12.1</li></ul>	<ul style="list-style-type: none"><li>• LA County Sanitation District Renewable Energy and Clean Fuels Program</li></ul>
BE-5. Wastewater Treatment Plant Biogas	Encourage renewable biogas projects.		
BE-6. Encourage Energy Efficiency Retrofits of Wastewater Equipment	Encourage the upgrade and replacement of wastewater treatment and pumping equipment.	<ul style="list-style-type: none"><li>• <b>Air Quality:</b> AQ 3.2, AQ 3.3, AQ 3.5</li><li>• <b>Public Services and Facilities:</b> PS/F 4.1, PS/F 4.2</li></ul>	
BE-7. Landfill Biogas	Partner with the owners and operators of landfills with at least 250,000 tons of waste-in-place to identify incentives to capture and clean landfill gas to beneficially use the biogas to generate electricity, produce biofuels, or otherwise offset natural gas or other fossil fuels.	<ul style="list-style-type: none"><li>• <b>Air Quality:</b> AQ 3.4</li><li>• <b>Public Services and Facilities:</b> PS/F 6.7</li></ul>	<ul style="list-style-type: none"><li>• LA County Sanitation District Renewable Energy and Clean Fuels Program</li></ul>
Land Use and Transportation			
LUT-1. Bicycle Programs and Supporting Facilities	Construct and improve bicycle infrastructure to increase biking and bicyclist access to transit and transit stations/hubs. Increase bicycle parking and “end-of-trip” facilities offered through the unincorporated County.	<ul style="list-style-type: none"><li>• <b>Land Use:</b> LU 5.4, LU 8.6, LU 8.7, LU 9.2, LU 9.3, LU 10.1</li><li>• <b>Mobility:</b> M 2.1, M 2.2, M 2.3, M 2.5, M 2.6, M 2.7, M 2.8, M 2.10, M 2.11, M. 4.1, M 5.3, M 5.4</li><li>• <b>Air Quality:</b> AQ 2.4</li><li>• <b>Economic Development:</b> ED 3.2</li></ul>	<ul style="list-style-type: none"><li>• LA Metro’s Countywide Sustainability Planning Program</li><li>• LA County 2012 Bicycle Master Plan</li><li>• LA County Healthy Design Ordinance</li></ul>
LUT-2. Pedestrian Network	Construct and improve pedestrian infrastructure to increase walking and pedestrian access to transit and transit stations/hubs. Construct 15,000 linear feet of pedestrian improvements per year.	<ul style="list-style-type: none"><li>• <b>Land Use:</b> LU 5.4, LU 8.6, LU 8.7, LU 9.2, LU 9.3, LU 10.1</li><li>• <b>Mobility:</b> M 2.1, M 2.2, M 2.3, M 2.4, M 2.6, M 2.7, M 2.8, M 2.10, M 2.11, M 4.1, M 5.1, M 5.4</li><li>• <b>Air Quality:</b> AQ 2.4</li><li>• <b>Economic Development:</b> ED 3.2</li></ul>	<ul style="list-style-type: none"><li>• LA County Healthy Design Ordinance</li></ul>

<sup>1</sup> Potential future forms of non-GHG energy could include nuclear fusion, which is being researched by many parties, including the Lockheed Martin Skunk Works in Palmdale, but which has not yet been experimentally proven as a viable commercial energy source. As new technologies become proven, the County will consider how they can support further development and deployment of such technologies.

Proposed CCAP Measure		Measure Analysis	
Title	Goal	Relevant General Plan Policies (2035 General Plan)	Relevant Local Programs
LUT-3. Transit Expansion	Work with Los Angeles County Metropolitan Transportation Authority (LA Metro) on a transit program that prioritizes transit by creating bus priority lanes, improving transit facilities, reducing transit-passenger time, and providing bicycle parking near transit stations. Construct and improve bicycle, pedestrian and transit infrastructure to increase bicyclist and pedestrian access to transit and transit stations/hubs.	<ul style="list-style-type: none"><li>• <b>Land Use:</b> LU 5.4, LU 8.6, LU 8.7, LU 9.2, LU 9.3, LU 10.1</li><li>• <b>Mobility:</b> M 2.6, M 2.10, M 4.1, M 4.15, M 5.3, M 5.4</li><li>• <b>Air Quality:</b> AQ 2.4</li><li>• <b>Economic Development:</b> ED 3.2</li></ul>	<ul style="list-style-type: none"><li>• LA Metro’s Countywide Sustainability Planning Program</li><li>• LA County proposed Transit Oriented Districts</li><li>• LA County Healthy Design Ordinance</li></ul>
LUT-4. Travel Demand Management	Encourage ride- and bike-sharing programs and employer-sponsored vanpools and shuttles. Encourage market-based bike sharing programs that support bicycle use around and between transit stations/hubs. Implement marketing strategies to publicize these programs and reduce commute trips.	<ul style="list-style-type: none"><li>• <b>Land Use:</b> LU 5.4, LU 8.6, LU 8.7, LU 9.2, LU 9.3, LU 10.1</li><li>• <b>Mobility:</b> M 4.1, M 4.2, M 4.15, M 5.4</li><li>• <b>Air Quality:</b> AQ 2.4</li><li>• <b>Economic Development:</b> ED 3.2</li></ul>	<ul style="list-style-type: none"><li>• South Coast Air Quality Management District’s (SCAQMD’s) Rule 2202, Employee Commute Trip Reduction Program</li><li>• LA County’s internal Commuter Benefit Plan</li></ul>
LUT-5. Car-Sharing Program	Implement a car-sharing program to allow people to have on-demand access to a shared fleet of vehicles on an as-needed basis.	<ul style="list-style-type: none"><li>• <b>Land Use:</b> LU 5.4, LU 8.6, LU 8.7, LU 9.2, LU 9.3, LU 10.1</li><li>• <b>Mobility:</b> M 4.1, M 4.4, M 4.15, M 5.3, M 5.4</li><li>• <b>Air Quality:</b> AQ 2.4</li><li>• <b>Economic Development:</b> ED 3.2</li></ul>	<ul style="list-style-type: none"><li>• Los Angeles Zipcar (City program)</li></ul>
LUT-6. Land Use Design and Density	Promote sustainability in land use design, including diversity of urban and suburban developments.	<ul style="list-style-type: none"><li>• <b>Land Use:</b> LU 5.4, LU 8.6, LU 8.7, LU 9.2, LU 9.3, LU 10.1</li><li>• <b>Mobility:</b> M 2.1, M 2.2, M 2.3, M. 2.4, M 2.5, M 2.6, M 2.7, M 2.8, M 2.10, M 2.11, M 4.10, M 5.1, M 5.3, M 5.4</li><li>• <b>Air Quality:</b> AQ 2.4</li><li>• <b>Economic Development:</b> ED 3.2</li></ul>	<ul style="list-style-type: none"><li>• Southern California Association of Government’s (SCAG’s) Final 2012–2035 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)</li></ul>
LUT-7. Transportation Signal Synchronization Program	Improve the network of traffic signals on the major streets throughout Los Angeles (LA) County.	<ul style="list-style-type: none"><li>• <b>Mobility:</b> M 2.3, M 4.3, M 4.5, M 4.11</li><li>• <b>Economic Development:</b> ED 3.2</li></ul>	<ul style="list-style-type: none"><li>• LA County Transportation Signal Synchronization Program</li></ul>
LUT-8. Electric Vehicle Infrastructure	Install 500 electric vehicle (EV) charging facilities at County-owned public venues (e.g., hospitals, beaches, stand-alone parking facilities, cultural institutions, and other facilities) and ensure that at least one-third of these charging stations will be available for visitor use.	<ul style="list-style-type: none"><li>• <b>Mobility:</b> M 7.4</li><li>• <b>Air Quality:</b> AQ 2.4</li><li>• <b>Economic Development:</b> ED 3.2</li></ul>	<ul style="list-style-type: none"><li>• SCAG’s Southern California Plug-in Electric Vehicle Readiness Plan and Atlas</li></ul>
LUT-9. Idling Reduction Goal	Encourage idling limits of 3 minutes for heavy-duty construction equipment, as feasible within manufacturer’s specifications.	<ul style="list-style-type: none"><li>• <b>Air Quality:</b> AQ 1.4, AQ 2.6, AQ 3.4</li></ul>	
LUT-10. Efficient Goods Movement	Support regional efforts to maximize the efficiency of the goods movement system throughout the unincorporated areas.	<ul style="list-style-type: none"><li>• <b>Mobility:</b> M 6.1, M 6.3, M 6.5</li><li>• <b>Air Quality:</b> AQ 2.4</li><li>• <b>Economic Development:</b> ED 3.2</li><li>• <b>Mobility:</b> M 7.1, M 7.2</li></ul>	<ul style="list-style-type: none"><li>• SCAG’s Goods Movement Program</li><li>• LA Metro’s Multi-County Goods Movement Action Plan</li><li>• LA County Sustainable Pavements Program</li></ul>
LUT-11. Sustainable Pavements Program	Reduce energy consumption and waste generation associated with pavement maintenance and rehabilitation.		
LUT-12. Electrify Construction and Landscaping Equipment	Utilize electric equipment wherever feasible for construction projects. Reduce the use of gas-powered landscaping equipment.	<ul style="list-style-type: none"><li>• <b>Air Quality:</b> AQ 2.6, AQ 3.5</li></ul>	<ul style="list-style-type: none"><li>• South Coast Air Quality Management District (SCAQMD) Mow Down Air Pollution Electric Vehicle Lawn Mower Exchange</li><li>• SCAQMD Lawn Mower and Leaf Blower Exchange Program</li></ul>
Water Conservation and Wastewater			
WAW-1. Per Capita Water Use Reduction Goal	Meet the State established per capita water use reduction goal <sup>2</sup> as identified by Senate Bill (SB) X7-7 for 2020.	<ul style="list-style-type: none"><li>• <b>Air Quality:</b> AQ 3.3, AQ 3.4</li><li>• <b>Conservation and Natural Resources:</b> C/NR 9.2</li><li>• <b>Parks and Recreation:</b> P/R 6.1, P/R 6.4, P/R 6.5</li><li>• <b>Public Services and Facilities:</b> PS/F 2.1, PS/F 2.2</li><li>• <b>Mobility:</b> M 7.1, M 7.2</li></ul>	<ul style="list-style-type: none"><li>• LA County Water Conservation Rebates</li><li>• LA County Smart Gardening workshops</li><li>• LA County Cash for Grass Program</li></ul>
WAW-2. Recycled Water Use, Water Supply Improvement Programs, and Stormwater Runoff	Promote the use of wastewater and gray water to be used for agricultural, industrial, and irrigation purposes. Manage stormwater, reduce potential treatment, and protect local groundwater supplies.	<ul style="list-style-type: none"><li>• <b>Conservation and Natural Resources:</b> C/NR 9.1</li><li>• <b>Parks and Recreation:</b> P/R 6.1</li><li>• <b>Public Services and Facilities:</b> PS/F 3.1, PS/F 3.2, PS/F 4.1, PS/F 4.2, PS/F 4.3</li></ul>	<ul style="list-style-type: none"><li>• Stormwater &amp; Runoff Pollution Control Program</li></ul>

<sup>2</sup> The State goal is a 20% reduction in per capita water use compared to baseline levels.

Proposed CCAP Measure		Measure Analysis	
Title	Goal	Relevant General Plan Policies (2035 General Plan)	Relevant Local Programs
Waste Reduction, Reuse, and Recycling			
SW-1. Waste Diversion Goal	For the County’s unincorporated areas, adopt a waste diversion goal to comply with all state mandates to divert at least 75% of waste from landfill disposal by 2020.	<ul style="list-style-type: none"><li>• <b>Public Services and Facilities:</b> PS/F 5.1, PS/F 5.2, PS/F 5.4, PS/F 5.5, PS/F 5.6, PS/F 5.7, PS/F 5.8, PS/F 5.9</li></ul>	<ul style="list-style-type: none"><li>• Clean LA Recycle Programs</li><li>• SCE Residential Appliance Recycling Program</li><li>• Construction and Demolition Debris Recycling and Reuse Program</li></ul>
Land Conservation and Tree Planting			
LC-1. Develop Urban Forests	Support and expand urban forest programs within the unincorporated areas.	<ul style="list-style-type: none"><li>• <b>Mobility:</b> M 2.9</li></ul>	<ul style="list-style-type: none"><li>• LA County Department of Parks and Recreation Urban Forestry Plan</li><li>• LA County Green Building Ordinance</li><li>• Mitigation-based ongoing tree planting efforts</li></ul>
LC-2. Create New Vegetated Open Space	Restore and revegetate previously disturbed land and/or unused urban and suburban areas.	<ul style="list-style-type: none"><li>• <b>Conservation and Natural Resources:</b> C/NR 1.3, C/NR 1.5, C/NR 1.6, C/NR 2.1, C/NR 2.2, C/NR 2.4</li></ul>	
LC-3. Promote the Sale of Locally Grown Foods and/or Products	Establish local farmers markets and support locally grown food.	<ul style="list-style-type: none"><li>• <b>Land Use:</b> LU 8.9, LU 8.11, LU 9.4, LU 9.5</li><li>• <b>Conservation and Natural Resources:</b> C/NR 8.1, C/NR 8.2, C/NR 8.3, C/NR 9.3, C/NR 9.4</li><li>• <b>Economic Development:</b> ED 2.9, ED4.6, ED 4.7, ED 4.8</li></ul>	<ul style="list-style-type: none"><li>• LA County Healthy Design Ordinance</li></ul>
LC-4. Protect Conservation Areas	Encourage the protection of existing land conservation areas.	<ul style="list-style-type: none"><li>• <b>Land Use:</b> LU 1.6, LU 3.1, LU 3.3</li><li>• <b>Conservation and Natural Resources:</b> C/NR 1.1, C/NR 1.2, C/NR 1.5, C/NR 2.1, C/NR 2.3, C/NR 2.4, C/NR 4.1</li><li>• <b>Parks and Recreation:</b> P/R 5.3</li></ul>	<ul style="list-style-type: none"><li>• LA County Oak Woodlands Conservation Management Plan</li></ul>



## Appendix E

# Acronyms and Abbreviations

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AF	acre-foot
AB	Assembly Bill
AC	Agricultural Commissioner
BAU	business as usual
BH	Beaches and Harbors
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCAP	community climate action plan
CCAR	California Climate Action Registry
CEQA	California Environmental Quality Act
CH <sub>4</sub>	methane
CIT	CCAP Implementation Team
CO <sub>2</sub>	carbon dioxide
CO <sub>2</sub> e	carbon dioxide equivalent
COS	County's Office of Sustainability
County	County of Los Angeles
DPH	Los Angeles County Department of Public Health
DPR	Los Angeles County Department of Parks and Recreation
DPW	Los Angeles County Department of Public Works
DRP	Los Angeles County Department of Regional Planning
EIR	Environmental Impact Report
EV	electric vehicle
EVSE	electric vehicle supply equipment
Fire	Los Angeles County Fire Department
GHG	greenhouse gas
GWP	Global Warming Potential
HFCs	hydrofluorocarbons
ISD	Los Angeles County Internal Services Department
kW	kilowatt
LA Basin Study	Los Angeles Basin Stormwater Conservation Study
LADWP	Los Angeles Department of Water and Power
LARC	Los Angeles Regional Collaborative for Climate Action and Sustainability
LID	Low Impact Development
MTA	Metropolitan Transportation Authority
MCAP	municipal climate action plan
MT CO <sub>2</sub> e	metric tons of carbon dioxide equivalents
MWEL	Model Water Efficiency Landscape Ordinance

N <sub>2</sub> O	nitrous oxide
NPV	net present value
PACE	Property Assessed Clean Energy
PFCs	perfluorinated carbons
RPS	Renewable Portfolio Standard
RTP/SCS	2012Regional Transportation Plan/Sustainable Communities Strategy
SB	Senate Bill
SCAG	Southern California Association of Governments
SCE	Southern California Edison
SCAQMD	South Coast Air Quality Management District
SREC	Solar Renewable Energy Certificate
SF <sub>6</sub>	sulfur hexafluoride
TSSP	Transportation Signal Synchronization Program
UCLA	University of California, Los Angeles
VTM	vehicle miles traveled



## **Appendix N: City of Huntington Park Natural Hazards Mitigation Plan**

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**City of Huntington Park 2020 Urban Water Management Plan**

# City of Huntington Park Natural Hazards Mitigation Plan

Approved October 16, 2004



**Prepared under contract with:**

*Emergency Planning Consultants  
San Diego, California  
Carolyn J. Harshman, President*

## **Special Recognition**

The Disaster Management Area Coordinators (DMAC) of Los Angeles County prepared planning guidance materials that were utilized by the City of Huntington Park in preparing this Natural Hazards Mitigation Plan. The City extends special recognition to DMAC Coordinator Mike Martinet for his editing contribution to the Hazard-Specific Sections of this Plan. The DMAC planning guidance materials were based on the Mitigation Plan from Clackamas County, Oregon. The City is grateful to DMAC and the Clackamas County Natural Hazards Mitigation Committee for their contributions to this project.

### **Special Thanks**

Hazard Mitigation Planning Team:

City of Huntington Park

- Don Pruyn, City Treasurer/Finance Director
- Henry Gray, Director of Community Development
- Alan Shear, Assistant to the City Manager
- Rosanna Ramirez, City Clerk
- Wesley R. Lind, Building Official/City Engineer
- Patrick Fu, Assistant City Engineering
- Gabriel Bautista, Planning Manager
- Barbara Grimm, Building and Safety Tech

Office of Disaster Management, Area E: Fan Abel, Coordinator

Office of Disaster Management, Area G: Mike Martinet, Executive Director

### **Acknowledgements**

City of Huntington Park City Council

- Juan R. Noguez, Mayor
- Elba Guerrero, Mayor Pro-Tem
- Mario Gomez, Councilmember
- Ofelia Hernandez, Councilmember
- Elba Romo, Councilmember

### **Mapping**

Other than Internet-sourced maps, the City of Huntington Park provided all of the maps included in this plan.

### **Consulting Services**

Project Management and Planning Services for this project were provided under contract by Emergency Planning Consultants -

Project Management Services:

Planning Services:

Carolyn J. Harshman, President

Carolyn J. Harshman, President

Daniel Robeson, Jr., Associate

## List of Natural Hazards Mitigation Plan Tables, Maps, and Photos

	<b>Type of Table, Map, or Photo</b>	<b>Section of the Plan</b>
Map 1-1	Base Map of the City of Huntington Park	Section 1: Introduction
Table 4-1	Federal Criteria for Risk Assessment	Section 4: Risk Assessment
Table 4-2	City of Huntington Park Critical and Essential Facilities Vulnerable to Hazards	Section 4: Risk Assessment
Table 5-1	Earthquake Events In Southern California	Section 5: Earthquake
Figure 5-1	Causes and Characteristics of Earthquakes in Southern California	Section 5: Earthquake
Map 5-1	Seismic Zones in California	Section 5: Earthquake
Map 5-2	Regional Fault Zones	Section 5: Earthquake
Map 5-3	Potential Liquefaction Areas in the City of Huntington Park	Section 5: Earthquake
Map 5-4	Liquefaction and EQ-Induced Landslide in the City of Huntington Park	Section 5: Earthquake
Table 5-4	Partial List of the Over 200 California Laws on Earthquake Safety	Section 5: Earthquake
Figure 6-1	Santa Ana Winds	Section 6: Windstorms
Table 6-1	Fujita Tornado Damage Scale	Section 6: Windstorms
Table 6-2	Santa Ana Wind Events during 2003	Section 6: Windstorms
Table 6-3	Major Windstorms in the Vicinity of Huntington Park	Section 6: Windstorms
Table 6-4	Major Tornado-like Events in the Vicinity of Huntington Park	Section 6: Windstorms
Table 6-5	Beaufort Scale	Section 6: Windstorms

Note: The maps in this plan were provided by the City of Huntington Park or were acquired from public Internet sources. Care was taken in the creation of these maps, but they are provided "as is". The City of Huntington Park cannot accept any responsibility for any errors, omissions or positional accuracy, and therefore, there are no warranties that accompany these products (the maps). Although information from land surveys may have been used in the creation of these products, in no way does this product represent or constitute a land survey. Users are cautioned to field verify information on this product before making any decisions.

# City of Huntington Park Natural Hazards Mitigation Plan

## Index

Title Page .....	i
Acknowledgments.....	ii
List of Maps .....	iii
Index .....	iv

### **Part I: Mitigation Actions**

Executive Summary  
Attachment 1: Mitigation Actions Matrix  
Section 1: Introduction  
Section 2: Plan Maintenance

### **Part II: Hazard Analysis**

Section 3: Community Profile  
Section 4: Risk Assessment  
Section 5: Earthquakes  
Section 6: Windstorms

### **Part III: Resources**

Appendix A: Plan Resource Directory  
Appendix B: Public Participation  
Appendix C: Benefit/Cost Analysis  
Appendix D: List of Acronyms  
Appendix E: Glossary

## **Executive Summary: Hazard Mitigation Action Plan**

The City of Huntington Park Natural Hazards Mitigation Plan includes resources and information to assist City residents, public and private sector organizations, and others interested in participating in planning for natural hazards. The mitigation plan provides a list of activities that may assist City of Huntington Park in reducing risk and preventing loss from future natural hazard events. The action items address multi-hazard issues, as well as activities for earthquakes and windstorms.

### **How is the Plan Organized?**

The Plan contains a Mitigation Actions Matrix, background on the purpose and methodology used to develop the mitigation plan, a profile of City of Huntington Park, sections on two natural hazards that occur within the City, and a number of appendices. All of the sections are described in detail in Section 1, Introduction.

### **Who Participated in Developing the Plan?**

The City of Huntington Park Natural Hazards Mitigation Plan is the result of a collaborative planning effort between City of Huntington Park citizens, public agencies, non-profit organizations, the private sector, and regional and state organizations. Public participation played a key role in development of goals and action items. Interviews were conducted with stakeholders across the City, and public outreach activities were conducted to include City of Huntington Park residents in plan development. A Planning Team guided the process of developing the plan.

### **The Planning Team was comprised of the following representatives:**

<b>City of Huntington Park</b>	Don Pruyn, City Treasurer/Finance Director Henry Gray, Dir. of Community Development Alan Shear, Assistant to the City Manager Rosanna Ramirez, City Clerk Wesley R. Lind, Building Official/City Engineer Patrick Fu, Assistant City Engineering Gabriel Bautista, Planning Manager Barbara Grimm, Building and Safety Tech
<b>Emergency Planning Consultants</b>	Carolyn J. Harshman, President

### **What is the Plan Mission?**

The mission of the City of Huntington Park Natural Hazards Mitigation Plan is to promote sound public policy designed to protect citizens, critical facilities, infrastructure, private property, and the environment from natural hazards. This can be achieved by increasing public awareness, documenting the resources for risk reduction and loss-prevention, and identifying activities to guide the City towards building a safer, more sustainable community.

## **What are the Plan Goals?**

The plan goals describe the overall direction that City of Huntington Park agencies, organizations, and citizens can take to work toward mitigating risk from natural hazards. The goals are stepping-stones between the broad direction of the mission statement and the specific recommendations outlined in the action items.

### **Protect Life and Property**

Implement activities that assist in protecting lives by making homes, businesses, infrastructure, critical facilities, and other property more resistant to losses from natural hazards.

Reduce losses and repetitive damages for chronic hazard events while promoting insurance coverage for catastrophic hazards.

Improve hazard assessment information to make recommendations for discouraging new development in high hazard areas and encouraging preventative measures for existing development in areas vulnerable to natural hazards.

### **Public Awareness**

Develop and implement education and outreach programs to increase public awareness of the risks associated with natural hazards.

Provide information on tools; partnership opportunities, and funding resources to assist in implementing mitigation activities.

### **Natural Systems**

Balance natural resource management, and land use planning with natural hazard mitigation to protect life, property, and the environment.

Preserve, rehabilitate, and enhance natural systems to serve natural hazard mitigation functions.

### **Partnerships and Implementation**

Strengthen communication and coordinate participation among and within public agencies, citizens, non-profit organizations, business, and industry to gain a vested interest in implementation.

Encourage leadership within public and private sector organizations to prioritize and implement local and regional hazard mitigation activities.

### **Emergency Services**

Establish policy to ensure mitigation projects for critical facilities, services, and infrastructure.

Strengthen emergency operations by increasing collaboration and coordination among public agencies, non-profit organizations, business, and industry.

Coordinate and integrate natural hazard mitigation activities, where appropriate, with emergency operations plans and procedures.

### **How are the Action Items Organized?**

The action items are a listing of activities in which City agencies and citizens can be engaged to reduce risk. Each action item includes an estimate of the timeline for implementation (see Attachment 1: Mitigation Actions Matrix).

The action items are organized within the following Matrix, which lists all of the multi-hazard and hazard-specific action items included in the mitigation plan. Data collection and research and the public participation process resulted in the development of these action items (see Appendix B: Public Participation). The Matrix includes the following information for each action item:

**Funding Source.** The actions items will be funded through a variety of sources, possibly including: operating budget/general fund, development fees, Community Development Block Grant (CDBG), Hazard Mitigation Grant Program (HMGP), other Grants, private funding, Capital Improvement Program (CIP), and other funding opportunities.

**Coordinating Organization.** The Mitigation Actions Matrix assigns primary responsibility for each of the action items. The hierarchies of the assignments vary – some are positions, others departments, and others Committees. No matter, the primary responsibility for implementing the action items falls to the entity shown as the “Coordinating Organization”. The coordinating organization is the public agency with regulatory responsibility to address natural hazards, or that is willing and able to organize resources, find appropriate funding, or oversee activity implementation, monitoring, and evaluation. Coordinating organizations may include local, county, or regional agencies that are capable of or responsible for implementing activities and programs.

**Timeline.** Action items include both short and long-term activities. Each action item includes an estimate of the timeline for implementation.

**Plan Goals Addressed.** The plan goals addressed by each action item are included as a way to monitor and evaluate how well the mitigation plan is achieving its goals once implementation begins. The plan goals are organized into the following five areas:

**Protect Life and Property**  
**Public Awareness**  
**Natural Systems**  
**Partnerships and Implementation**  
**Emergency Services**

## **How Will the Plan be Implemented, Monitored, and Evaluated?**

The Plan Maintenance Section (Section 2) of the Plan details the formal process that will ensure that the City of Huntington Park Natural Hazards Mitigation Plan remains an active and relevant document. The plan maintenance process includes a schedule for monitoring and evaluating the Plan annually and producing a plan revision every five years. This section describes how the City will integrate public participation throughout the plan maintenance process. Finally, this section includes an explanation of how the City of Huntington Park government intends to incorporate the mitigation strategies outlined in this Plan into existing planning mechanisms such as the City's General Plan, Capital Improvement Plans, and Building & Safety Codes.

### **Plan Adoption**

Adoption of the Natural Hazards Mitigation Plan by the local jurisdiction's governing body is one of the prime requirements for approval of the Plan. Once the Plan is completed, the City Council will be responsible for adopting the City of Huntington Park Natural Hazards Mitigation Plan. The local agency governing body has the responsibility and authority to promote sound public policy regarding natural hazards. The City Manager will have the authority to periodically need to re-adopt the plan as it is revised to meet changes in the natural hazard risks and exposures in the community. The approved Natural Hazard Mitigation Plan will be significant in the future growth and development of the community.

### **Coordinating Body**

A City of Huntington Park Hazard Mitigation Committee will be responsible for coordinating implementation of Plan action items and undertaking the formal review process. The City Manager will assign representatives from City agencies, including, but not limited to, the current Hazard Mitigation Planning Team members.

### **Convener**

The City Council will adopt the City of Huntington Park Natural Hazards Mitigation Plan and the Mitigation Committee will take responsibility for plan implementation. The City Manager will serve as a convener to facilitate the Team meetings, and will assign tasks such as updating and presenting the Plan to the members of the Team. Plan implementation and evaluation will be a shared responsibility among all of the Hazard Mitigation Planning Team members.

### **Implementation through Existing Programs**

City of Huntington Park addresses statewide planning goals and legislative requirements through its General Plan, Capital Improvement Plans, and City Building & Safety Codes. The Natural Hazard Mitigation Plan provides a series of recommendations that are

closely related to the goals and objectives of these existing planning programs. City of Huntington Park will have the opportunity to implement recommended mitigation action items through existing programs and procedures.

### **Economic Analysis of Mitigation Projects**

The Federal Emergency Management Agency's approaches to identify costs and benefits associated with natural hazard mitigation strategies or projects fall into two general categories: benefit/cost analysis and cost-effectiveness analysis. Conducting benefit/cost analysis for a mitigation activity can assist communities in determining whether a project is worth undertaking now, in order to avoid disaster-related damages later. Cost-effectiveness analysis evaluates how best to spend a given amount of money to achieve a specific goal. Determining the economic feasibility of mitigating natural hazards can provide decision makers with an understanding of the potential benefits and costs of an activity, as well as a basis upon which to compare alternative projects.

### **Formal Review Process**

The City of Huntington Park Natural Hazards Mitigation Plan will be evaluated on an annual basis to determine the effectiveness of programs, and to reflect changes in land development or programs that may affect mitigation priorities. The evaluation process includes a firm schedule and time line, and identifies the local agencies and organizations participating in plan evaluation. The convener will be responsible for contacting the Hazard Mitigation Committee and organizing the annual meeting. Committee members will be responsible for monitoring and evaluating the progress of the mitigation strategies in the Plan.

### **Continued Public Involvement**

City of Huntington Park is dedicated to involving the public directly in the continual review and updates of the Hazard Mitigation Plan. Copies of the plan will be catalogued and made available at City Hall and at the public library. The Plan also includes the address and the phone number of the City Department, responsible for keeping track of public comments on the Plan. In addition, copies of the Plan and any proposed changes will be posted on the City website. This site will also contain an email address and phone number to which people can direct their comments and concerns.

## City of Huntington Park Mitigation Actions Matrix

Natural Hazard	Action Item	Coordinating Organization	Timeline	Plan Goals Addressed				
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services
Multi-Hazard Action Items								
MH #1-1	Integrate the goals and action items from the Huntington Park Natural Hazard Mitigation Plan into existing regulatory documents and programs, where appropriate.	Mitigation Committee	Ongoing				X	
MH #1-2	Identify and pursue funding opportunities to develop and implement local mitigation activities.	Mitigation Committee	Ongoing				X	
MH #1-3	Establish a formal role for the City of Huntington Park to develop a sustainable process for implementing, monitoring, and evaluating citywide mitigation activities.	City Manager’s Office	Ongoing				X	
MH #1-4	Develop public and private partnerships to foster natural hazard mitigation program coordination and collaboration in the City of Huntington Park.	Mitigation Committee	Ongoing				X	
MH #1-5	Develop inventories of City owned buildings and facilities, and infrastructure and prioritize mitigation	Building Safety	1-2 years	X			X	X

## City of Huntington Park Mitigation Actions Matrix

Natural Hazard	Action Item	Coordinating Organization	Timeline	Plan Goals Addressed				
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services
	projects.							
MH #1-6	Strengthen emergency services preparedness and response by linking emergency services with natural hazard mitigation programs and enhancing public education on a regional scale.	Mitigation Committee	Ongoing		X			X
MH #1-7	Develop, enhance, and implement education programs aimed at mitigating natural hazards, and reducing the risk to citizens, private property owners, businesses.	Mitigation Committee	Ongoing		X			
MH #1-8	Enhance strategies for debris management for windstorm events.	Field Services	2 years				X	X
MH #1-9	Pursue funding opportunities to develop and implement mitigation activities.	Police and Building and Safety	Ongoing	X				
MH #1-10	Promote hazard mitigation as a public value in recognition of its importance to the health, safety, and welfare of the population.	Mitigation Committee	Ongoing	X	X			
MH #1-11	Pursue grants to enhance all agencies/departments' incident response	Police Department	Ongoing	X	X			X

## City of Huntington Park Mitigation Actions Matrix

Natural Hazard	Action Item	Coordinating Organization	Timeline	Plan Goals Addressed				
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services
	capabilities.							
MH #1-12	Coordinate the implementation of pre-disaster mitigation programs.	Mitigation Committee	Ongoing		X		X	
MH #1-13	Partner with other organizations and agencies in the community to pursue grant programs and foundations that may support mitigation activities.	Mitigation Committee	2 years		X		X	
MH #1-14	Pursue funding sources for structural and nonstructural retrofitting of Public structures that are identified as seismically vulnerable.	Mitigation Committee	Ongoing	X				X
MH #1-15	Pursue sources of support such as philanthropic foundations, community foundations, and professional organizations such as the Urban Land Institute or American Planning Association who might be able to provide technical or financial support for recovery planning.	Mitigation Committee	Ongoing	X	X			X
MH #1-16	Improve hazard assessment information to make recommendations for	Planning Division	Ongoing	X	X			

## City of Huntington Park Mitigation Actions Matrix

Natural Hazard	Action Item	Coordinating Organization	Timeline	Plan Goals Addressed				
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services
	discouraging new development and encouraging preventative measures for existing development in areas vulnerable to natural hazards.							
MH #1-17	Update Multi-Hazard Functional Plan to meet State of California SEMS (Standardized Emergency Management System) regulations.	Mitigation Committee	1 year	X			X	X
MH #1-18	Coordinate and integrate natural hazard mitigation activities, where appropriate, with emergency operations plans and procedures.	Police Department	2 years	X				X
MH #1-19	Develop inventories of at-risk Public buildings and infrastructure and prioritize mitigation projects.	Building and Safety	1 year	X				
MH #1-20	Identify critical facilities at risk from natural hazards events.	Building and Safety	1 year	X				X
MH #1-21	Maintain enforcement of wind-resistant building sites and construction codes.	Building and Safety	Ongoing	X				
MH #1-22	Develop public and private partnerships to foster natural hazard mitigation	Safety Committee	2 years		X		X	

## City of Huntington Park Mitigation Actions Matrix

Natural Hazard	Action Item	Coordinating Organization	Timeline	Plan Goals Addressed				
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services
	program coordination and collaboration in city.							
MH #1-23	Establish clear roles for participants, meeting regularly to pursue and evaluate implementation of mitigation strategies.	Mitigation Committee	1 year				X	
MH #1-24	Maintain communication between DOT and City road departments to work together to prioritize and identify strategies to deal with road problems.	Engineering	Ongoing				X	X
MH #1-25	Maintain protocol for communication electric providers and the Department of Transportation to assure rapid restoration of transportation capabilities.	Engineering	Ongoing				X	X
MH #1-26	Strengthen emergency operations by increasing collaboration and coordination among public agencies, non-profit organizations, business, and industry.	Police Department, Safety Committee	Ongoing				X	X
MH #1-27	Develop a Preliminary Damage Assessment (PDA) process and review PDA data to identify planning concerns.	Mitigation Committee	2 years				X	X

## City of Huntington Park Mitigation Actions Matrix

Natural Hazard	Action Item	Coordinating Organization	Timeline	Plan Goals Addressed				
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services
MH #1-28	Compile a directory of out-of-area contractors to help with repairs/reconstruction so that restoration occurs in a timely manner.	Building and Safety, Mitigation Committee	1 year				X	X
MH #1-29	Conduct interim planning to locate, set up, and manage temporary sites where government functions can continue their operations during recovery.	Mitigation Committee	2 years				X	X
MH #1-30	Determine temporary protection measures for Public buildings and facilities; install plastic sheeting on roofs, cover exterior openings such as windows or doors, draining trapped water in ceilings or draining accumulated flood waters, temporary shoring to avoid imminent building collapse or damage.	Building and Safety	2 years	X			X	X
MH #1-31	Utility and communications systems supporting emergency services operations will be maintained to withstand the impacts of disasters.	Police Department, Building and Safety	2 years					X

## City of Huntington Park Mitigation Actions Matrix

Natural Hazard	Action Item	Coordinating Organization	Timeline	Plan Goals Addressed				
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services
MH #1-32	Develop strategies for debris management for severe storm events.	Field Services	3 years	X				
MH #1-33	Familiarize public officials of requirements regarding public assistance for disaster response.	Police Department	Ongoing	X				
MH #1-34	Establish a formal role for the Hazards Mitigation committee to develop a sustainable process for implementing, monitoring, and evaluating local mitigation activities.	Mitigation Committee	3 years	X	X		X	
MH #1-35	Identify opportunities for partnering with citizens, private contractors, and other jurisdictions to increase availability of equipment and manpower for efficiency of response efforts.	Police Department	Ongoing	X				
MH #1-36	Work with Community Planning Organizations (CPO's) and other neighborhood groups to establish community response teams.	Police Department	Ongoing	X				
MH #1-37	Conduct disaster exercises to test the EOP.	Police Department	Ongoing					X

## City of Huntington Park Mitigation Actions Matrix

Natural Hazard	Action Item	Coordinating Organization	Timeline	Plan Goals Addressed				
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services
MH #1-38	Work with the City Planning Division to review regulations pertaining to their jurisdiction to make sure that adequate zoning regulations are in place to reduce future development in high hazard areas in their jurisdiction.	Planning Division	1-2 years	X			X	
MH #1-39	Develop and deliver information to all City residents, through community groups and/or publications, information on how to shelter in place and when it is appropriate to do so.	Mitigation Committee	1 year		X			
MH #1-40	Ensure adequacy of emergency operations plans and compliance with the states SEMS Regulations.	Police Department	Ongoing				X	X
MH #1-41	Provide technical assistance to help the community develop disaster management operations capabilities.	Mitigation Committee	Ongoing	X				
MH #1-42	Review priorities for restoration of the community's infrastructure and vital public facilities following a disaster.	Field Services	Ongoing	X				
MH	Review and amend corrective measures	Mitigation Committee	Ongoing	X				

## City of Huntington Park Mitigation Actions Matrix

Natural Hazard	Action Item	Coordinating Organization	Timeline	Plan Goals Addressed				
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services
#1-43	to address existing problems.							
MH #1-44	Install and improve back-up power in critical facilities.	Field Services	Ongoing	X				
MH #1-45	Improve water systems to assist with Wildfire and Drought conditions.	Field Services	Ongoing	X				
MH #1-46	Review and amend preventive measures to avoid creating new problems.	Mitigation Committee	Ongoing	X				
MH #1-47	Develop updates for the Natural Hazards Mitigation Action Plan based on new information.	Mitigation Committee	5 years	X				
MH #1-48	Improve water quality and balance public and private property rights.	Mitigation Committee	Ongoing	X				
MH #1-49	Review observed damage with a view toward revising codes to help mitigate damage from future disasters.	Mitigation Committee	When needed	X				
MH #1-50	Determine which building owners (and their contractors) are responsible for hauling construction and demolition debris to proper landfills.	Building and Safety	Ongoing	X				
MH #1-51	Conduct damage assessment to determine if structures are safe and	Building and Safety	When needed	X				

## City of Huntington Park Mitigation Actions Matrix

Natural Hazard	Action Item	Coordinating Organization	Timeline	Plan Goals Addressed				
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services
	capable of being used.							
MH #1-52	Utility and communications systems supporting emergency services operations will be retrofitted or relocated to withstand the impacts of disasters.	Police Department	Ongoing	X				
MH #1-53	Minimize suffering and disruption caused by disasters.	Mitigation Committee	Ongoing/ When needed	X				
MH #1-54	Determine which structures and/or facilities that will not be allowed to be repaired/reconstructed.	Building and Safety	When needed	X				
MH #1-55	Bury the utility lines on main Streets- and those crossing main streets in an effort to complete the utility line burial project.	Engineering	Ongoing	X				
MH #1-56	Distribute FEMA's Emergency Management Guide for Businesses and Industry and Preparing Your Business for the Unthinkable brochure to the local Chamber of Commerce's.	Mitigation Committee	Ongoing		X		X	

## City of Huntington Park Mitigation Actions Matrix

Natural Hazard	Action Item	Coordinating Organization	Timeline	Plan Goals Addressed				
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services
MH #1-57	Participate in State and County sponsored Disaster Preparedness Campaigns.	Mitigation Committee	Ongoing	X	X			
MH #1-58	Add links to the City's website for FEMA and American Red Cross for self-help information.	Mitigation Committee	1 year	X	X		X	
MH #1-59	Develop informational literature on animal disaster plans and supply kits and have them available in veterinary clinics and pet stores.	Mitigation Committee	1-2 years		X		X	
MH #1-60	Enroll Planning and Zoning, Emergency Services personnel in the Emergency Management Institute's "Digital Hazard Data" course to provide them the skills and knowledge to use digital flood data and other hazard data.	Planning Department	Ongoing					X
MH #1-61	Encourage and facilitate the adoption of building codes that provide protection for new construction and substantial renovations from the effects of identified hazards.	Building and Safety	Ongoing	X				

## City of Huntington Park Mitigation Actions Matrix

Natural Hazard	Action Item	Coordinating Organization	Timeline	Plan Goals Addressed				
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services
MH #1-62	Provide adequate and consistent enforcement of ordinances and codes within and between jurisdictions.	Mitigation Committee	Ongoing	X				
MH #1-63	Promote local development of National, consensus-based building, life safety, and fire codes and standards.	Building and Safety	Ongoing	X				
MH #1-64	Incorporate Life Safety Regulations in codes.	Building and Safety	Ongoing	X				
MH #1-65	Change/modify/improve codes to better standards for all buildings UBC, NEC, California, County.	Building and Safety	Ongoing	X				
MH #1-66	Adopt appropriate codes.	Building and Safety	Ongoing	X				
MH #1-67	Develop building and reconstruction policies and requirements for post disaster situations.	Mitigation Committee	Ongoing	X				
MH #1-68	Encourage reduction of non-structural and structural earthquake hazards in homes business and government offices.	Mitigation Committee	Ongoing	X				
MH #1-69	Ensure repairs of construction funded by Federal disaster assistance conform to	Building and Safety	Ongoing	X				

## City of Huntington Park Mitigation Actions Matrix

Natural Hazard	Action Item	Coordinating Organization	Timeline	Plan Goals Addressed				
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services
	applicable codes and standards.							
MH #1-70	Review current building codes and standards to determine adequacy for disaster restoration of properties.	Building and Safety	Ongoing	X				
MH #1-71	Monitor trees and branches in public areas at risk of breaking or falling in wind storms, prune or thin trees or branches when they would pose an immediate threat to property, or other significant structures or critical facilities.	Field Services	Ongoing	X				
MH #1-72	Conduct training and exercises as required in the State's SEMS regulations.	Mitigation Committee	Ongoing	X			X	
MH #1-73	Develop a "how to" mitigation materials at special events. This display would include pictures and information, such as that contained in FEMA's Retrofitting for Homeowners Guide.	Mitigation Committee	Ongoing		X		X	
MH #1-74	Develop a disaster display booth for use in City Library. The display booth could	Mitigation Committee	Ongoing		X		X	

## City of Huntington Park Mitigation Actions Matrix

Natural Hazard	Action Item	Coordinating Organization	Timeline	Plan Goals Addressed				
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services
	include information on disaster mitigation and preparedness as well as resource guides for additional reading.							
MH #1-75	Educate the public about hazards prevalent to their area.	Mitigation Committee	Ongoing	X	X			
MH #1-76	Promote public education to increase awareness of hazards and opportunities for mitigation.	Mitigation Committee	Ongoing	X	X			
MH #1-77	Educate the public about procedures for reporting human-caused incidents.	Mitigation Committee	Ongoing	X	X			
MH #1-78	Conduct a detailed vulnerability assessment in the future in order to accurately identify the extent of damages to vulnerable buildings, infrastructure, and critical facilities.	Mitigation Committee	Ongoing	X	X	X	X	X
<b>Earthquake Action Items</b>								
EQ #2-1	Integrate new earthquake hazard mapping data for the City.	Building and Safety Department	Ongoing	X			X	
EQ #2-2	Pursue funding sources for structural and nonstructural retrofitting of public structures that are identified as	Mitigation Committee	Ongoing		X		X	

## City of Huntington Park Mitigation Actions Matrix

Natural Hazard	Action Item	Coordinating Organization	Timeline	Plan Goals Addressed				
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services
	seismically vulnerable.							
EQ #2-3	Encourage purchase of earthquake hazard insurance.	Mitigation Committee	Ongoing	X	X			
EQ #2-4	Consider seismic strength evaluations of critical facilities in the City to identify vulnerabilities for mitigation of public infrastructure and critical facilities to meet current seismic standards.	Mitigation Committee	5 years	X	X			
EQ #2-5	Encourage reduction of nonstructural earthquake hazards in homes, businesses, and government offices.	Mitigation Committee	Ongoing	X	X			
EQ #2-6	Ensure repairs or construction funded by Federal disaster assistance conform to applicable codes and standards.	Building and Safety Division	Ongoing					
EQ #2-7	Pursue seismic strength evaluations of critical facilities in the city to identify vulnerabilities for mitigation of public infrastructure, and critical facilities to meet current seismic standards.	Building and Safety	2 years	X				
EQ #2-8	Integrate new earthquake hazard mapping data for the City.	Building and Safety	Ongoing		X			

## City of Huntington Park Mitigation Actions Matrix

Natural Hazard	Action Item	Coordinating Organization	Timeline	Plan Goals Addressed				
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services
EQ #2-9	Partner with Home Depot to develop brochure and building materials required for residential retrofitting.	Building and Safety Department	2 years					
<b>Windstorm Action Items</b>								
WS #3-1	Maintain and Improve programs to keep public trees from threatening lives, property, and public infrastructure during windstorm events and provide information to private owners.	Field Services	Ongoing	X			X	X
WS #3-2	Support/encourage electrical utilities to use underground construction methods where possible to reduce power outages from windstorms.	Planning Division	Ongoing			X	X	
WS #3-3	Maintain and enforcement of wind-resistant building citing and construction codes.	Building and Safety Department	Ongoing	X	X			
WS #3-4	Support/encourage electrical utilities to use underground construction methods where possible to reduce power outages	Planning and Building and Safety	Ongoing	X				

## City of Huntington Park Mitigation Actions Matrix

Natural Hazard	Action Item	Coordinating Organization	Timeline	Plan Goals Addressed				
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services
	from windstorms.							
WS #3-5	Develop and implement programs to keep trees from threatening lives, property, and public infrastructure during windstorm events.	Field Services	Ongoing	X				
WS #3-6	Develop public awareness materials that promote proper maintenance of private trees prior to storms.	Mitigation Committee	1 year	X	X		X	

## **Section 1**

### **Introduction**

Throughout history, the residents of City of Huntington Park have dealt with the various natural hazards affecting the area. Photos, journal entries, and newspapers show that the residents of the area dealt with earthquakes and windstorms.

Although there were fewer people in the area, the natural hazards adversely affected the lives of those who depended on the land and climate conditions for food and welfare. As the population of the City continues to increase, the exposure to natural hazards creates an even higher risk than previously experienced.

The City of Huntington Park is located in central Los Angeles County, and offers the benefits of living in a Mediterranean type of climate. The City is characterized by the unique and attractive landscape that makes the area so popular. However, the potential impacts of natural hazards associated with the terrain make the environment and population vulnerable to natural disasters.

The City is subject to earthquakes and windstorms. It is impossible to predict exactly when these disasters will occur, or the extent to which they will affect the City. However, with careful planning and collaboration among public agencies, private sector organizations, and citizens within the community, it is possible to minimize the losses that can result from these natural disasters.

### **Why Develop a Mitigation Plan?**

As the cost of damage from natural disasters continues to increase, the community realizes the importance of identifying effective ways to reduce vulnerability to disasters. Natural hazard mitigation plans assist communities in reducing risk from natural hazards by identifying resources, information, and strategies for risk reduction, while helping to guide and coordinate mitigation activities throughout the City.

The plan provides a set of action items to reduce risk from natural hazards through education and outreach programs and to foster the development of partnerships, and implementation of preventative activities such as land use programs that restrict and control development in areas subject to damage from natural hazards.

The resources and information within the Mitigation Plan:

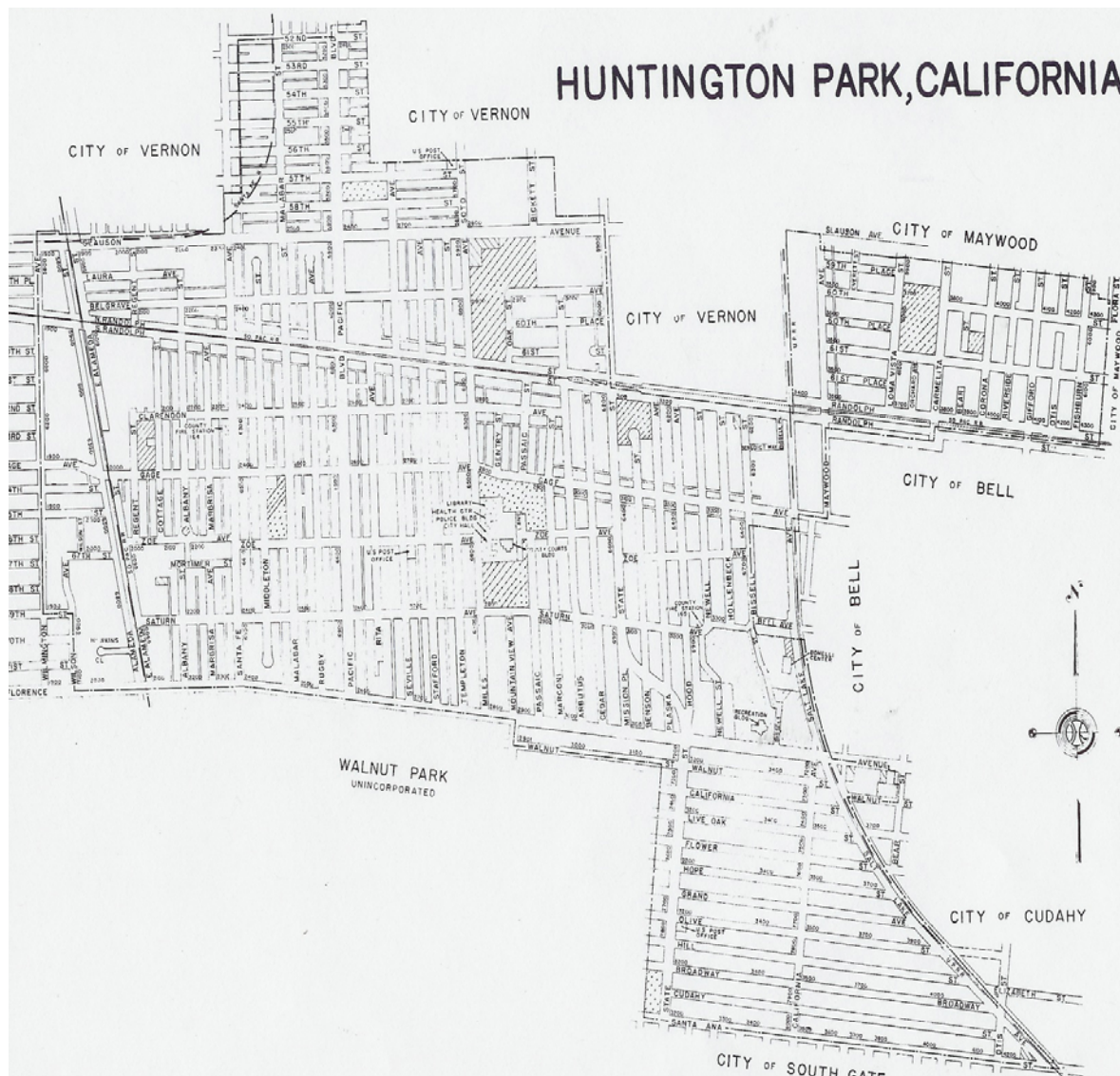
- (1) Establish a basis for coordination and collaboration among agencies and the public in City of Huntington Park;
- (2) Identify and prioritize future mitigation projects; and
- (3) Assist in meeting the requirements of federal assistance programs.

The Mitigation Plan works in conjunction with other City plans, including the Multi-Hazard Functional Plan.

## Whom Does the Mitigation Plan Affect?

The City of Huntington Park Natural Hazards Mitigation Plan affects the entire City. Map 1-1 shows major roads in the City of Huntington Park. This plan provides a framework for planning for natural hazards. The resources and background information in the plan is applicable City-wide, and the goals and recommendations can lay groundwork for other local mitigation plans and partnerships.

**Map 1-1: Base Map of City of Huntington Park  
(Source: City of Huntington Park General Plan)**



## **Natural Hazard Land Use Policy in California**

Planning for natural hazards should be an integral element of any city's land use planning program. All California cities and counties have General Plans and the implementing ordinances that are required to comply with the statewide planning regulations.

The continuing challenge faced by local officials and state government is to keep the network of local plans effective in responding to the changing conditions and needs of California's diverse communities, particularly in light of the very active seismic region in which we live.

This is particularly true in the case of planning for natural hazards where communities must balance development pressures with detailed information on the nature and extent of hazards.

Planning for natural hazards, calls for local plans to include inventories, policies, and ordinances to guide development in hazard areas. These inventories should include the compendium of hazards facing the community, the built environment at risk, the personal property that may be damaged by hazard events and most of all, the people who live in the shadow of these hazards.

## **Support for Natural Hazard Mitigation**

All mitigation is local, and the primary responsibility for development and implementation of risk reduction strategies and policies lies with local jurisdictions. Local jurisdictions, however, are not alone. Partners and resources exist at the regional, state and federal levels. Numerous California state agencies have a role in natural hazards and natural hazard mitigation. Some of the key agencies include:

- The Governor's Office of Emergency Services (OES) is responsible for disaster mitigation, preparedness, response, recovery, and the administration of federal funds after a major disaster declaration;
- The Southern California Earthquake Center (SCEC) gathers information about earthquakes, integrates this information on earthquake phenomena, and communicates this to end-users and the general public to increase earthquake awareness, reduce economic losses, and save lives.
- The California Division of Forestry (CDF) is responsible for all aspects of wildland fire protection on private, state, and administers forest practices regulations, including landslide mitigation, on non-federal lands.
- The California Division of Mines and Geology (DMG) is responsible for geologic hazard characterization, public education, the development of partnerships aimed at reducing risk, and exceptions (based on science-based refinement of tsunami inundation zone delineation) to state mandated tsunami zone restrictions; and

- The California Division of Water Resources (DWR) plans, designs, constructs, operates, and maintains the State Water Project; regulates dams; provides flood protection and assists in emergency management. It also educates the public, serves local water needs by providing technical assistance

## **Plan Methodology**

Information in the Mitigation Plan is based on research from a variety of sources. Staff from the City of Huntington Park conducted data research and analysis, facilitated Planning Team meetings and public outreach activities, and developed the final mitigation plan. The research methods and various contributions to the plan include:

### ***Input from the Planning Team:***

The Planning Team convened four times to guide development of the Mitigation Plan. The Team played an integral role in developing the mission, goals, and action items for the Mitigation Plan. The Team consisted of representatives of seven local government agencies, including:

- City of Huntington Park Field Services Department
- City of Huntington Park Finance Department
- City of Huntington Park Planning Division
- City of Huntington Park Police Department
- City of Huntington Park Building/Safety Department
- City of Huntington Park Engineering Department
- City of Huntington Park City's Clerk's Office

### ***Stakeholder Interviews:***

City staff conducted interviews with individuals and specialists from organizations interested in natural hazards planning. The interviews identified common concerns related to natural hazards and identified key long and short-term activities to reduce risk from natural hazards. A complete listing of all the reviewers of the Plan is as follows:

- Los Angeles County Fire Department
- Los Angeles County Public Works
- Los Angeles County Health Department
- Los Angeles County Sanitation District
- Los Angeles Unified School District
- South Coast Air Quality Management District
- Huntington Park Engineering/Public Works Department
- Huntington Park Building and Safety Division
- Huntington Park Water Department (ECO Resources)
- Huntington Park License Department
- Huntington Park Police Department
- Huntington Park Code Enforcement Division
- Los Angeles County Office of Emergency Management
- Southern California Gas Company

Edison Company  
City of Huntington Park Chamber of Commerce  
City of Huntington Park Business Improvement District  
Mark Patti, Field Services  
Gabriel Bautista, Planning Division  
William Diers, Police Department  
Patrick FU, Engineering Department  
Barbara Grimm, Building Safety  
Rosanna Ramirez, City Clerks Office

### **State and federal guidelines and requirements for mitigation plans:**

Following are the Federal requirements for approval of a Natural Hazards Mitigation Plan:

- Open public involvement, with public meetings that introduce the process and project requirements.
- The public must be afforded opportunities for involvement in: identifying and assessing risk, drafting a plan, and public involvement in approval stages of the plan.
- Community cooperation, with opportunity for other local government agencies, the business community, educational institutions, and non-profits to participate in the process.
- Incorporation of local documents, including the local General Plan, the Zoning Ordinance, the Building Codes, and other pertinent documents.

The following components must be part of the planning process:

- Complete documentation of the planning process.
- A detailed risk assessment on hazard exposures in the community.
- A comprehensive mitigation strategy, which describes the goals & objectives, including proposed strategies, programs & actions to avoid long-term vulnerabilities.
- A plan maintenance process, which describes the method and schedule of monitoring, evaluating and updating the plan and integration of the Natural Hazards Mitigation Plan into other planning mechanisms.
- Formal adoption by the City Council.
- Plan Review by both State OES and FEMA.

These requirements are spelled out in greater detail in the following plan sections and supporting documentation.

Public participation opportunities were created through use of local media, the City's website, distribution of a natural hazards questionnaire, and the City Council public hearing. In addition, the makeup of the Planning Team insured a constant exchange of data and input from a variety of different perspectives.

Through its consultant, Emergency Planning Consultants, the City had access to numerous existing mitigation plans from around the country, as well as current FEMA hazard mitigation planning standards (386 series).

Other reference materials consisted of county and city mitigation plans, including:

- Clackamas County (Oregon) Natural Hazards Mitigation Plan
- Six County (Utah) Association of Governments
- Upper Arkansas Area Risk Assessment and Hazard Mitigation Plan
- Urbandale-Polk County, Iowa Plan
- Hamilton County, Ohio Plan
- Natural Hazard Planning Guidebook from Butler County, Ohio

Hazard specific research: City of Huntington Park staff collected data and compiled research on two hazards: earthquakes and windstorms. Research materials came from the City General Plan, the City's Threat Assessment contained in the Multi-Hazard Functional Plan, and state agencies including OES and CDF.

The City of Huntington Park staff identified current mitigation activities, resources and programs, and potential action items from research materials and stakeholder interviews.

### **Public Input**

The City of Huntington Park encouraged public participation and input in the Natural Hazards Mitigation Plan by posting its activities at key locations throughout the City, in the media and on the Internet. In addition, the City distributed 300 natural hazards surveys during the plan preparation period and at the following locations and events: Public Counter, Internet, Direct Delivery to City Commissioners and distribution at community meetings.

During the review period for the Draft Plan, copies of the Plan were also made available to interested citizens. Citizens were encouraged to review copies of the Plan Draft and participate in the City Council public hearing, which was held on October 18, 2004. Copies of the Draft Plan were also circulated to outside agencies for comment.

The following is a summary of the public comments gathered from the distributed surveys and the City Council meeting: Residents are more concerned with the dangers posed by earthquakes than any other natural disaster; concern was expressed for the ability of the many older buildings located in the City's to withstand high magnitude earthquakes; residents also expressed concern with regard to flooding and drought; and residents requested that information on preparing for disasters be more widely distributed.

The resources and information cited in the mitigation plan provide a strong local perspective and help identify strategies and activities to make City of Huntington Park more disaster resistant.

## **How Is the Plan Used?**

Each section of the Plan provides information and resources to assist people in understanding the City and the hazard-related issues facing citizens, businesses, and the environment. Combined, the sections of the plan work together to create a document that guides the mission to reduce risk and prevent loss from future natural hazard events.

The structure of the plan enables people to use a section of interest to them. It also allows City government to review and update sections when new data becomes available. The ability to update individual sections of the mitigation plan places less of a financial burden on the City. Decision-makers can allocate funding and staff resources to selected pieces in need of review, thereby avoiding a full update, which can be costly and time-consuming. New data can be easily incorporated, resulting in a Natural Hazards Mitigation Plan that remains current and relevant to City of Huntington Park.

The Plan is organized into three parts. Part I contains an executive summary, Mitigation Actions Matrix, introduction, and plan maintenance section. Part II contains a community profile, risk assessment, and hazard-specific sections. Part III includes the appendices. Each section of the plan is described below.

## **Part I: Mitigation Actions**

### **Executive Summary: Hazard Mitigation Action Plan**

The Action Plan provides an overview of the mitigation plan mission, goals, and action items.

#### **Attachment 1: Mitigation Actions Matrix**

The plan action items are included in this section, and address multi-hazard issues, as well as hazard-specific activities that can be implemented to reduce risk and prevent loss from future natural hazard events.

### **Section 1: Introduction**

The Introduction describes the background and purpose of developing the mitigation plan for City of Huntington Park.

### **Section 2: Plan Maintenance**

This section provides information on plan implementation, monitoring and evaluation.

## **Part II: Hazard Analysis**

### **Section 3: Community Profile**

This section presents the history, geography, demographics, and socioeconomics of the City of Huntington Park. It serves as a tool to provide an historical perspective of natural hazards in the City.

#### **Section 4: Risk Assessment**

This section provides information on hazard identification, vulnerability and risk associated with natural hazards in City of Huntington Park.

#### **Sections 4-6: Hazard Specific Information**

Hazard-Specific Information on the two chronic hazards is addressed in this plan. Chronic hazards occur with some regularity and may be predicted through historic evidence and scientific methods. The chronic hazards addressed in the plan include:

Section 5: Earthquakes

Section 6: Windstorms

Each of the hazard-specific information includes information on the history, hazard causes and characteristics, and hazard assessment.

### **Part III: Resources**

The plan appendices are designed to provide users of the City of Huntington Park Natural Hazards Mitigation Plan with additional information to assist them in understanding the contents of the mitigation plan, and potential resources to assist them with implementation.

#### **Appendix A: Plan Resource Directory**

The resource directory includes City, regional, state, and national resources and programs that may be of technical and/or financial assistance to City of Huntington Park during plan implementation.

#### **Appendix B: Public Participation**

This appendix includes specific information on the various public processes used during development of the plan.

#### **Appendix C: Benefit/Cost Analysis**

This section describes FEMA's requirements for benefit cost analysis in natural hazards mitigation, as well as various approaches for conducting economic analysis of proposed mitigation activities.

## **Appendix D: List of Acronyms**

This section provides a list of acronyms for City, regional, state, and federal agencies and organizations that may be referred to within the City of Huntington Park Natural Hazards Mitigation Plan.

## **Appendix E: Glossary**

This section provides a glossary of terms used throughout the plan.

## **Section 2:**

### **Plan Maintenance**

The Plan Maintenance Section of this document details the formal process that will ensure that the Natural Hazards Mitigation Plan remains an active and relevant document. The plan maintenance process includes a schedule for monitoring and evaluating the Plan annually and producing a plan revision every five years. This section describes how the City will integrate public participation throughout the plan maintenance process. Finally, this Section includes an explanation of how the City of Huntington Park government intends to incorporate the mitigation strategies outlined in this Plan into existing planning mechanisms such as the City's General Plan, Capital Improvement Plans, and Building and Safety Codes.

### **Monitoring and Implementing the Plan**

#### **Plan Adoption**

The City Council will be responsible for adopting the Natural Hazards Mitigation Plan. This governing body has the authority to promote sound public policy regarding natural hazards. Once the plan has been adopted, it will be submitted to the State Hazard Mitigation Officer at The Governor's Office of Emergency Services. The Governor's Office of Emergency Services will then submit the plan to the Federal Emergency Management Agency (FEMA) for review. This review will address the federal criteria outlined in FEMA Interim Final Rule 44 CFR Part 201. Upon acceptance by FEMA, the City will gain eligibility for Hazard Mitigation Grant Program funds.

#### **Coordinating Body**

The City's Hazard Mitigation Committee will be responsible for coordinating implementation of plan action items and undertaking the formal review process. The City Manager (or other authority) may assign additional representatives from City agencies. The present members of the Mitigation Committee include:

<b>City of Huntington Park</b>	Don Pruyn, City Treasurer/Finance Director Henry Gray, Dir. of Community Development Alan Shear, Assistant to the City Manager Rosanna Ramirez, City Clerk Wesley R. Lind, Building Official/City Engineer Patrick Fu, Assistant City Engineering Gabriel Bautista, Planning Manager Barbara Grimm, Building and Safety Tech
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The Natural Hazards Mitigation Committee will meet on a quarterly basis to review progress on the Plan. The meetings will provide an opportunity to discuss the progress of

the action items and maintain the partnerships that are essential for the sustainability of the Mitigation Plan.

### **Convener**

The City Council will adopt the Natural Hazards Mitigation Plan, and the Mitigation Committee will take responsibility for plan implementation. The City Manager (or designee) will serve as a convener to facilitate the Team meetings, and will assign tasks such as updating and presenting the Plan to the members of the Committee. Plan implementation and evaluation will be a shared responsibility among all of the Committee members.

### **Implementation through Existing Programs**

The City addresses statewide planning goals and legislative requirements through its General Plan, Capital Improvement Plans, and City Building and Safety Codes. The Natural Hazards Mitigation Plan provides a series of recommendations - many of which are closely related to the goals and objectives of existing planning programs. The City will have the opportunity to implement recommended mitigation action items through existing programs and procedures.

The City's Building & Safety Department is responsible for administering the Building & Safety Codes. In addition, the Mitigation Committee will work with other agencies at the state level to review, develop and ensure Building & Safety Codes that are adequate to mitigate or prevent damage by natural hazards. This is to ensure that life-safety criteria are met for new construction.

The goals and action items in the mitigation plan may be achieved through activities recommended in the City's Capital Improvement Plans (CIP). Various City departments develop CIP plans, and review them on an annual basis. Upon annual review of the CIPs, the Mitigation Committee will work with the City departments to identify action items in the Natural Hazards Mitigation Plan consistent with CIP planning goals and integrate them where appropriate.

The meetings of the Mitigation Committee will provide an opportunity for Committee members to report back on the progress made on the integration of mitigation planning elements into the City's planning documents and procedures.

### **Economic Analysis of Mitigation Projects**

At the Hazard Mitigation Advisory Committee's first implementation meeting, the STAPLEE Tool (Plan Maintenance – Attachment 1) or some other prioritizing tool will be utilized to prioritize the action items identified in the Mitigation Actions Matrix (Executive Summary – Attachment 1). In addition, appropriate funding sources will be identified for the “top ten” priority action items.

FEMA's approaches to identify the costs and benefits associated with natural hazard mitigation strategies, measures, or projects fall into two general categories: benefit/cost analysis and cost-effectiveness analysis.

Conducting benefit/cost analysis for a mitigation activity can assist communities in determining whether a project is worth undertaking now, in order to avoid disaster-related damages later.

Cost-effectiveness analysis evaluates how best to spend a given amount of money to achieve a specific goal. Determining the economic feasibility of mitigating natural hazards can provide decision-makers with an understanding of the potential benefits and costs of an activity, as well as a basis upon which to compare alternative projects.

Given federal funding, the Mitigation Committee will use a FEMA-approved benefit/cost analysis approach to identify and prioritize mitigation action items. For other projects and funding sources, the Committee will use other approaches to understand the costs and benefits of each action item and develop a prioritized list. For more information regarding economic analysis of mitigation action items, please see Appendix C: Benefit/Cost Analysis.

## **Evaluating and Updating the Plan**

### **Formal Review Process**

The Natural Hazards Mitigation Plan will be evaluated on an annual basis to determine the effectiveness of programs, and to reflect changes in land development or programs that may affect mitigation priorities. The evaluation process includes a firm schedule and timeline, and identifies the local agencies and organizations participating in plan evaluation. The convener or designee will be responsible for contacting the Mitigation Committee members and organizing the annual meeting.

Committee members will be responsible for monitoring and evaluating the progress of the mitigation strategies in the Plan.

The Mitigation Committee will review the goals and action items to determine their relevance to changing situations in the City, as well as changes in State or Federal policy, and to ensure they are addressing current and expected conditions. The Committee will also review the Risk Assessment portion of the Plan to determine if this information should be updated or modified, given any new available data. The coordinating organizations responsible for the various action items will report on the status of their projects, the success of various implementation processes, difficulties encountered, success of coordination efforts, and which strategies should be revised.

The convener will assign the duty of updating the plan to one or more of the Committee members. The Committee will notify all holders of the Plan when changes have been

made. Every five years the updated Plan will be submitted to the State Hazard Mitigation Officer and the Federal Emergency Management Agency for review.

### **Continued Public Involvement**

The City is dedicated to involving the public directly in review and updates of the Natural Hazards Mitigation Plan. The Mitigation Committee members are responsible for the annual review and update of the plan.

The public will also have the opportunity to provide feedback about the Plan. Copies of the Plan will be catalogued and kept at all of the appropriate agencies in the City. The existence and location of these copies will be publicized in the quarterly city newsletter which reaches every household in the City. The plan also includes the address and the phone number of the City's Planning and Building Department, responsible for keeping track of public comments on the Plan.

In addition, copies of the Plan and any proposed changes will be posted on the City's Website. This site will also contain an email address and phone number to which people can direct their comments and concerns.

A public meeting will also be held after each annual evaluation or as deemed necessary by the Mitigation Committee. The meetings will provide the public a forum for which they can express its concerns, opinions, or ideas about the Plan. The Mitigation Committee will be responsible for using City resources to publicize the annual public meetings and maintain public involvement through the public access cable channel, Website, and local newspapers.

## Plan Maintenance – Attachment 1: Simplified STAPLEE Worksheet

### Simplified STAPLEE Worksheet – Prioritizing Mitigation Actions (Social, Technical, Administrative, Political, Legal, Economic, Environmental)

1. Fill in the goal. Use a separate worksheet for each goal. The considerations under each criterion are suggested ones to use; you can revise these to reflect your own considerations.
2. Fill in the action items associated with the goal.
3. **Scoring:** For each action item, indicate a plus (+) for favorable, and a negative (-) for less favorable.

When you complete the scoring, add up the positives to establish your priorities. For STAPLEE categories that do not apply, fill in N/A for not applicable. Only leave a blank if you do not know an answer – seek the input of an expert.

Goal: \_\_\_\_\_

STAPLEE Category	S (Social)		T (Technical)			A (Administrative)			P (Political)		
Categories (right)  Action Items (below)	Community Acceptance	Effect on Segment of Population	Technical Feasibility	Long- term Solution	Secondary Impacts	Staffing	Funding Allocated	Maintenance/ Operations	Political Support	Local Champion	Public Support
1.											
2.											
3.											
4.											
5.											
6.											

<b>STAPLEE Categories</b>	<b>L (Legal)</b>			<b>E (Economic)</b>				<b>E (Environmental)</b>				
<b>Categories (right)  Action Items (below)</b>	<b>State Authority</b>	<b>Existing Local Authority</b>	<b>Potential Legal Challenge</b>	<b>Benefit of Action</b>	<b>Cost of Action</b>	<b>Contributes to Economic Goals</b>	<b>Outside Funding Required</b>	<b>Effect on Land/ Water</b>	<b>Effect on Endangered Species</b>	<b>Effect on HAZMAT/Waste Sites</b>	<b>Consistent with Community Environmental Goals</b>	<b>Consistent with Federal Laws</b>
1.												
2.												
3.												
4.												
5.												
6.												

## **Section 3:**

### **Community Profile**

#### **Why Plan for Natural Hazards in City of Huntington Park?**

Natural hazards impact citizens, property, the environment, and the economy of City of Huntington Park. Earthquakes and windstorms have exposed City of Huntington Park residents and businesses to the financial and emotional costs of recovering after natural disasters. The risk associated with natural hazards increases as more people move to areas affected by natural hazards.

Even in those communities that are essentially “built-out” i.e., have little or no vacant land remaining for development; population density continues to increase when low density housing is replaced with medium and high density development projects.

The inevitability of natural hazards, and the growing population and activity within the City create an urgent need to develop strategies, coordinate resources, and increase public awareness to reduce risk and prevent loss from future natural hazard events. Identifying the risks posed by natural hazards, and developing strategies to reduce the impact of a hazard event can assist in protecting life and property of citizens and communities. Local residents and businesses can work together with the City to create a natural hazards mitigation plan that addresses the potential impacts of hazard events.

#### **Geography and the Environment**

City of Huntington Park has an area of 3.5 square miles and is located in central Los Angeles County.

The elevation of the City of Huntington Park is 170 feet above sea level. The terrain is relatively flat and completely developed or urbanized.

#### **Community Profile**

The City of Huntington Park is rich in history. The area comprising the City of Huntington Park was first settled in the later part of the 19<sup>th</sup> and the City itself was incorporated in 1906. The City is highly urbanized and has one of the highest population densities in Los Angeles County according to the City’s General Plan.

As stated in the City’s General Plan, the city is not served by the regional highway system however the city is served by many major arterial routes. The major east-west arterials include Slauson Avenue, Gage Avenue, and Florence Avenue. North-south arterial roadways include Alameda Street, Santa Fe Avenue, Pacific Boulevard, State Street, and California Avenue according to the City’s General Plan.

The General Plan for the City of Huntington Park maps the following railways through the city:

**Union Pacific:** The Union Pacific Railroad runs through the city from north to south on the eastern boundary off the city.

**Southern Pacific:** The Southern Pacific Railroad runs north to south near the western boundary and east-west through the northern portion of the city.

**Santa Fe:** The Santa Fe runs near the northwest border in the City.

## **Major Rivers**

According to the City's General Plan, the two rivers nearest the City of Huntington Park are the Los Angeles River and Rio Hondo River. The Emergency Operations Plan for the City states that the National Flood Insurance Program designates the City as a "Zone C", or area with minimal flooding hazards. The EOP also states that the primary source of flooding to the City would be a 100-year flood on the Los Angeles River. If the Los Angeles River overflows, sections the City of Huntington Park could experience shallow flooding.

## **Climate**

Average temperatures in the City of Huntington Park range from 65 degrees in the winter months to 84 degrees in the summer months. However the temperatures can vary over a wide range, particularly when the Santa Ana winds blow, bringing higher temperatures and very low humidity.

Rainfall in the city averages 15 inches of rain per year. But the term "average" means very little in this region as the annual rainfall during this time period has ranged from only 4.35 inches in 2001-2002 to 38.2 inches in 1883-1884.

Furthermore, actual rainfall in Southern California tends to fall in large amounts during sporadic and often heavy storms rather than consistently over storms at somewhat regular intervals. In short, rainfall in Southern California might be characterized as feast or famine within a single year. Because the metropolitan basin is largely built out, water originating in higher elevation communities can have a sudden impact on adjoining communities that have a lower elevation.

## **Minerals and Soils**

The characteristics of the minerals and soils present in City of Huntington Park indicate that potential types of hazards that may occur. Rock hardness and soil characteristics can determine whether or not an area will be prone to geologic hazards such as earthquakes, liquefaction, and landslides.

## **Other Significant Geologic Features**

City of Huntington Park, like most of the Los Angeles Basin, lie over the area of one or more known earthquake faults, and potentially many more unknown faults, particularly so-called lateral or blind thrust faults.

As identified in the City's General Plan, the major Faults that have the potential to affect the City of Huntington Park are:

- San Andreas
- Newport - Inglewood
- Sierra Madre
- Whittier - Elsinore
- San Fernando
- San Jacinto

The Los Angeles Basin has a history of powerful and relatively frequent earthquakes, dating back to the powerful 8.0+ San Andreas earthquake of 1857 which did substantial damage to the relatively few buildings that existed at the time. Paleoseismological research indicates that large (8.0+) earthquakes occur on the San Andreas fault at intervals between 45 and 332 years with an average interval of 140 years<sup>1</sup>. Other lesser faults have also caused very damaging earthquakes since 1857. Notable earthquakes include the 1933 Long Beach Earthquake, the 1971 San Fernando Earthquake, the 1987 Whittier Earthquake and the 1994 Northridge Earthquake.

In addition, many areas in the Los Angeles Basin have sandy soils that are subject to liquefaction. The City of Huntington Park is located in a liquefaction zone that covers most of the Los Angeles Basin (see Section 5: Earthquake).

## **Population and Demographics**

City of Huntington Park has a population of about 61,348 (according to the 2000 Census) in an area of 3.5 square miles.

The increase of people living in City of Huntington Park creates more community exposure, and changes how agencies prepare for and respond to natural hazards. For example, more people living on the urban fringe can increase risk of fire. Wildfire has an increased chance of starting due to human activities in the urban/rural interface, and has the potential to injure more people and cause more property damage. But an urban/wildland fire is not the only exposure to the City of Huntington Park. In the 1987 publication, Fire Following Earthquake issued by the All Industry Research Advisory Council, Charles Scawthorn explains how a post-earthquake urban conflagration would develop. The conflagration would be started by fires resulting from earthquake damage,

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<sup>1</sup> Peacock, Simon M.,  
<http://aamc.geo.lsa.umich.edu/eduQuakes/EQpredLab/EQprediction.peacock.html>

but made much worse by the loss of pressure in the fire mains, caused by either lack of electricity to power water pumps, and /or loss of water pressure resulting from broken fire mains.

Furthermore, increased density can affect risk. For example, narrower streets are more difficult for emergency service vehicles to navigate, the higher ratio of residents to emergency responders affects response times, and homes located closer together increase the chances of fires spreading.

Natural hazards do not discriminate, but the impacts in terms of vulnerability and the ability to recover vary greatly among the population. According to Peggy Stahl of the Federal Emergency Management Agency (FEMA) Preparedness, Training, and Exercise Directorate, 80% of the disaster burden falls on the public, and within that number, a disproportionate burden is placed upon special needs groups: women, children, minorities, and the poor.<sup>2</sup>

According the 2000 census figures, the demographic make up of the city is as follows:

	<b>City of Huntington Park</b>
Caucasian	2.7%
Hispanic	95.6%
African American	.8%
Asian	.8%
Native American	1.0%

The ethnic and cultural diversity suggests a need to address multi-cultural needs and services.

The percentage of citizens living in poverty in the City of Huntington Park is about 25.2% according to the 2000 Census. Of those, 31.5% are under 18 years old, and 18.7% are over 65.

Vulnerable populations, including seniors, disabled citizens, women, and children, as well as those people living in poverty, may be disproportionately impacted by natural hazards.

Examining the reach of hazard mitigation policies to special needs populations may assist in increasing access to services and programs. FEMA's Office of Equal Rights addresses this need by suggesting that agencies and organizations planning for natural disasters identify special needs populations, make recovery centers more accessible, and review practices and procedures to remedy any discrimination in relief application or assistance.

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<sup>2</sup> [www.fema.gov](http://www.fema.gov)

The cost of natural hazards recovery can place an unequal financial responsibility on the general population when only a small proportion may benefit from governmental funds used to rebuild private structures. Discussions about natural hazards that include local citizen groups, insurance companies, and other public and private sector organizations can help ensure that all members of the population are a part of the decision-making processes.

## **Land and Development**

Development in Southern California from the earliest days was a cycle of boom and bust. The Second World War however dramatically changed that cycle. Military personnel and defense workers came to Southern California to fill the logistical needs created by the war effort. The available housing was rapidly exhausted and existing commercial centers proved inadequate for the influx of people. Immediately after the war, construction began on the freeway system, and the face of Southern California was forever changed. Home developments and shopping centers sprung up everywhere and within a few decades the central basin of Los Angeles County was virtually built out. This pushed new development further and further away from the urban center.

The City of Huntington Park General Plan addresses the use and development of private land, including residential and commercial areas. This plan is one of the City's most important tools in addressing environmental challenges including transportation and air quality; growth management; conservation of natural resources; clean water and open spaces.

The environment of most Los Angeles County cities is nearly identical with that of their immediate neighbors and the transition from one incorporated municipality to another is seamless to most people. Seamless too are the exposures to the natural hazards that affect all of Southern California.

### **Housing and Community Development (Source: City's General Plan, 2000 Census)**

	<b>City of Huntington Park</b>
<b>Development Type</b>	
Residential	41%
Commercial/Industrial	11%
Open Space	3%
<b>Housing Type</b>	
Single-Family	34.3%
Multi-Residential (20+ units)	9.9%
Mobilehomes	0.0%
<b>Housing Statistics</b>	
Total Available Housing Units	15,335

Owner-Occupied Housing	27.4%
Average Household Size	4.12 persons
Median Home Value	\$164,700

**Employment and Industry**  
(Source: 2000 Census)

	<b>City of Huntington Park</b>
<b>Principal Employment Activities</b>	
Production, Transportation, and Material Moving	38.3%
Sales and Office Occupations	24.4%
Service Occupations	15.6%
Management (professional and related occupations)	11.8%
Construction	9.2%
<b>Major Industries</b>	
Manufacturing	31.0%
Education, Health & Social Services	12.2%
Retail Trade	11.5%
Arts, Entertainment, Recreation, Accommodation, and Food Services	7.6%

Mitigation activities are needed at the business level to ensure the safety and welfare of workers and limit damage to industrial infrastructure. Employees are highly mobile, commuting from surrounding areas to industrial and business centers. This creates a greater dependency on roads, communications, accessibility and emergency plans to reunite people with their families. Before a natural hazard event, large and small businesses can develop strategies to prepare for natural hazards, respond efficiently, and prevent loss of life and property.

**Transportation and Commuting Patterns**

Private automobiles are the dominant means of transportation in Southern California and in the City of Huntington Park. However, the City of Huntington Park meets its public transportation needs through the Southern California Rapid Transit District with fixed route service on local and express routes according the City's General Plan.

According to the 2000 Census, the City has a population of 61,348. The mean travel time to work for the residents of the City of Huntington Park is 29.5 minutes.

The major east-west commuting arterials include Slauson Avenue, Gage Avenue, and Florence Avenue. North-south arterial roadways include Alameda Street, Santa Fe Avenue, Pacific Boulevard, State Street, and California Avenue.

Localized flooding can render roads unusable. A severe winter storm has the potential to disrupt the daily driving routine of hundreds of thousands of people. Natural hazards can disrupt automobile traffic and shut down local and regional transit systems.

## **Section 4:**

### **Risk Assessment**

#### **What is a Risk Assessment?**

Conducting a risk assessment can provide information: on the location of hazards, the value of existing land and property in hazard locations, and an analysis of risk to life, property, and the environment that may result from natural hazard events. Specifically, the five levels of a risk assessment are as follows:

##### **1) Hazard Identification**

The Planning Team considered a range of natural hazards facing the region including: Earthquakes, Flooding, Earth Movement, Windstorms, Wildfire, Tsunami, and Drought. The attached Ranking Your Hazards - Attachment 1 handout guided the Team in prioritizing the natural hazards with the highest probability of significantly impacting the City of Huntington Park. The Team agreed that any hazards receiving a Team average score of “3” or higher would be included in the Natural Hazards Mitigation Plan. Utilizing the ranking technique, the Team identified: Earthquakes and Windstorms as the most prominent hazards facing the community.

This is the description of the geographic extent, potential intensity and the probability of occurrence of a given hazard. Maps are frequently used to display hazard identification data. The City of Huntington Park identified two major hazards that affect this geographic area. These hazards – earthquakes and windstorms - were identified through an extensive process that utilized input from the Hazard Mitigation Planning Team. The geographic extent of each of the identified hazards has been identified by the City of Huntington Park utilizing the maps contained in the City’s General Plan and the MHFP Threat Assessment, and are illustrated in the tables, maps, and photos listed on page iii.

##### **2) Profiling Hazard Events**

The process describes the causes and characteristics of each hazard and what part of the City's population, infrastructure, and environment may be vulnerable to each specific hazard. A profile of each hazard discussed in this plan is provided in each hazard section. For a full description of the history of hazard specific events, please see the appropriate Hazard-Specific Section.

**Vulnerability: Location, Extent, and Probability\***

	<b>Location (Where)</b>	<b>Extent (How Big)</b>	<b>Probability (How Often)*</b>
<b>Hazard</b>			
Earthquake	Entire Project Area	According to USGS, there is a 60% chance in the next 30 years of an earthquake measuring greater than 6.7 occurring in southern California.	Moderate
Windstorm	Entire Project Area	50 miles per hour or greater	Moderate
* Probability is defined as: Low = 1:500 years, Moderate = 1:100 years, High = 1:10 years			

### **3) Vulnerability Assessment/Inventorying Assets**

This is a combination of hazard identification with an inventory of the existing (or planned) property development(s) and population(s) exposed to a hazard. Critical facilities are of particular concern because these facilities provide critical products and services to the general public that are necessary to preserve the welfare and quality of life in the City and fulfill important public safety, emergency response, and/or disaster recovery functions. The critical facilities have been identified and are illustrated in Table 4-2.

### **4) Risk Analysis**

Estimating potential losses involves assessing the damage, injuries, and financial costs likely to be sustained in a geographic area over a given period of time. This level of analysis involves using mathematical models. The two measurable components of risk analysis are magnitude of the harm that may result and the likelihood of the harm occurring. Describing vulnerability in terms of dollar losses provides the community and the state with a common framework in which to measure the effects of hazards on assets. Data was not available to make vulnerability determinations in terms of dollar losses. The Mitigation Actions Matrix (Executive Summary – Attachment 1) includes an action item to conduct such an assessment in the future.

### **5) Assessing Vulnerability/ Analyzing Development Trends**

This step provides a general description of land uses and development trends within the community so that mitigation options can be considered in land use planning and future land use decisions. This plan provides comprehensive description of the character of City of Huntington Park in the Community Profile. This description includes the geography and environment, population and demographics, land use and development, housing and community development, employment and industry, and transportation and commuting patterns. Analyzing these components of City of Huntington Park can help in identifying potential problem areas and can serve as a guide for incorporating the goals and ideas contained in this mitigation plan into other community development plans.

Hazard assessments are subject to the availability of hazard-specific data. Gathering data for a hazard assessment requires a commitment of resources on the part of participating organizations and agencies. Each hazard-specific section of the plan includes a section on hazard identification using data and information from City, County or State agency sources.

Regardless of the data available for hazard assessments, there are numerous strategies the City can take to reduce risk. These strategies are described in the action items detailed in each hazard section of this Plan. Mitigation strategies can further reduce disruption to critical services, reduce the risk to human life, and alleviate damage to personal and public property and infrastructure. Action items throughout the hazard sections provide recommendations to collect further data to map hazard locations and conduct hazard assessments.

### **Federal Requirements for Risk Assessment**

Recent federal regulations for hazard mitigation plans outlined in 44 CFR Part 201 include a requirement for risk assessment. This risk assessment requirement is intended to provide information that will help communities to identify and prioritize mitigation activities that will reduce losses from the identified hazards. There are three hazards profiled in the mitigation plan, including earthquakes, flooding, and windstorms. The Federal criteria for risk assessment and information on how the City of Huntington Park Natural Hazards Mitigation Plan meets those criteria is outlined in Table 4-1 below.

**Table 4-1: Federal Criteria for Risk Assessment**

<b>Section 322 Plan Requirement</b>	<b>How is this addressed?</b>
Identifying Hazards	Each hazard section includes an inventory of the best available data sources that identify hazard areas. To the extent data are available; the existing maps identifying the location of the hazard were utilized. The Executive Summary and the Risk Assessment sections of the plan include a list of the hazard maps.
Profiling Hazard Events	Each hazard section includes documentation of the history, and causes and characteristics of the hazard in the City.
Assessing Vulnerability: Identifying Assets	Where data is available, the vulnerability assessment for each hazard addressed in the mitigation plan includes an inventory of all publicly owned land within hazardous areas. Each hazard section provides information on vulnerable areas in the City in the Community Issues section. Each hazard section also identifies potential mitigation strategies.
Assessing Vulnerability: Estimating Potential Losses:	The Risk Assessment Section of this mitigation plan identifies key critical facilities in the City and includes a map of these facilities. Vulnerability assessments have been completed for the hazards addressed in the plan, and quantitative estimates were made for each hazard where data was available.
Assessing Vulnerability: Analyzing Development Trends	The Community Profile Section of this plan provides a description of the development trends in the City, including the geography and environment, population and demographics, land use and development, housing and community development, employment and industry, and transportation and commuting patterns.

### **Critical and Essential Facilities**

Facilities critical to government response and recovery activities (i.e., life safety and property and environmental protection) include: 911 centers, emergency operations centers, police and fire stations, public works facilities, communications centers, sewer and water facilities, hospitals, bridges and roads, and shelters. Also, facilities that, if damaged, could cause serious secondary impacts may also be considered "critical." A hazardous material facility is one example of this type of "secondary impact" critical facility.

Essential facilities are those facilities that are vital to the continued delivery of key government services or that may significantly impact the public's ability to recover from

the emergency. These facilities may include: buildings such as the jail, law enforcement center, public services building, community corrections center, the courthouse, and juvenile services building and other public facilities such as schools. The following table illustrates the critical and essential facilities serving the City of Huntington Park.

**Table 4-2: City of Huntington Park Critical and Essential Facilities Vulnerable to Hazards\* (\*data not available to determine the extent of damages to the critical and essential facilities)**

<b>Earthquakes</b>	<b>Windstorms</b>	<b>Facility</b>	<b>Address</b>
✓	✓	City Hall	6550 Miles Avenue
✓	✓	Police Department	6542 Miles Avenue
✓		Field Services Department	6900 Bissell Street
✓		Parks and Recreation Center	3401 Florence Avenue
✓		L.A. County Fire Station	3255 Saturn Avenue
✓		L.A. County Fire Station	6301 S. Santa Fe Avenue
✓	✓	Mission Hospital	3111 Florence Avenue
✓	✓	St. Francis Medical Center	2700 Slauson Avenue
✓		L.A. County Public Library	6518 Miles Avenue
✓		Huntington Park High School	6020 Miles Avenue
✓		Nimitz Junior High School	6021 Carmelita
✓		Henry T. Gage Junior High School	2880 Gage Avenue
✓		Miles Avenue Elementary	6720 Miles Avenue
✓		Middleton Street Elementary	6537 Middleton Street
✓		State Street Elementary	3211 Santa Ana Street
✓	✓	Civic Center Park	6550 Miles Avenue
✓		Salt Lake Park - Municipal Park	3401 East Florence Avenue
✓		Freedom Park	6051 Corona Avenue
✓		Westside Park	2061 Gage Avenue

Earthquakes	Windstorms	Facility	Address
✓		L.A. County Public Library	6518 Miles Avenue
✓		H.P. Water Well/Reservoir #12	8015 Salt Lake Avenue
✓		H.P. Water Well/Reservoir #14	6219 Bissell Street
✓	✓	H.P. Water Well/Reservoir/Elevated Tank #15	6717 Cottage Street
		H.P. Water Well/Reservoir #16	3520 Florence Avenue
✓	✓	H.P. Water Well/Reservoir/Elevated Tank #17	5920 Miles
✓		H.P. Water Well #18	6900 Bissell
✓		H.P. Water Reservoir #18	3706 Florence Avenue
✓	✓	Salvation Army	2965 Gage Avenue
✓		Maywood Water Well	5953 Gifford
✓		Southern Calif. Water Reservoir	1954 Laura Avenue
✓		Edison Power Transfer Station	NWC Zoe St.-Rugby Avenue
✓		Family Center	3355 Gage Avenue

### Summary

Natural hazard mitigation strategies can reduce the impacts concentrated at large employment and industrial centers, public infrastructure, and critical facilities. Natural hazard mitigation for industries and employers may include developing relationships with emergency management services and their employees before disaster strikes, and establishing mitigation strategies together. Collaboration among the public and private sector to create mitigation plans and actions can reduce the impacts of natural hazards.

## Ranking Your Hazards

*It is important to keep in mind that your rankings should be based on a hazard event that would overwhelm your jurisdiction's ability to respond effectively.*

For each hazard listed assign a score. Place a number in the appropriate box.

Hazard Scoring	
1	An event of that magnitude is not likely to occur
2	There is a slight chance that an event of that magnitude will occur
3	It is possible that an event of that magnitude will occur
4	An event of that magnitude has occurred here in the past and is likely to occur again
5	There is a high probability that an event of that magnitude will occur

Identify any additional hazards for the jurisdiction at the end of the list labeled as "Other Hazard."

Hazard	Score
Earthquake	
Flooding	
Wildfire	
Windstorm	
Earth Movement (Landslide/Debris Flow)	
Tsunami	
Drought	
Other Hazard _____	
Other Hazard _____	
Other Hazard _____	
Other Hazard _____	
Other Hazard _____	
Other Hazard _____	

# Section 5: Earthquake Hazards in the City of Huntington Park

## **Why Are Earthquakes a Threat to the City of Huntington Park?**

The most recent significant earthquake event affecting Southern California was the January 17, 1994 Northridge Earthquake. At 4:31 A.M. on Monday, January 17, a moderate but very damaging earthquake with a magnitude of 6.7 struck the San Fernando Valley. In the following days and weeks, thousands of aftershocks occurred, causing additional damage to affected structures.

Fifty seven (57) people were killed and more than 1,500 people seriously injured. For days afterward, thousands of homes and businesses were without electricity; tens of thousands had no gas; and nearly 50,000 had little or no water. Approximately 15,000 structures were moderately to severely damaged, which left thousands of people temporarily homeless. A total of 66,500 buildings were inspected. Nearly 4,000 were severely damaged and over 11,000 were moderately damaged. Several collapsed bridges and overpasses created commuter havoc on the freeway system. Extensive damage was caused by ground shaking, but earthquake triggered liquefaction and dozens of fires also caused additional severe damage. This extremely strong ground motion in large portions of Los Angeles County resulted in record economic losses.

However, the earthquake occurred early in the morning on a holiday. This circumstance considerably reduced the potential effects. Many collapsed buildings were unoccupied, and most businesses were not yet open. The direct and indirect economic losses ran into the 10's of billions of dollars.

Historical and geological records show that California has a long history of seismic events. Southern California is probably best known for the San Andreas Fault, a 400 mile long fault running from the Mexican border to a point offshore, west of San Francisco. "Geologic studies show that over the past 1,400 to 1,500 years large earthquakes have occurred at about 130 year intervals on the southern San Andreas Fault. As the last large earthquake on the Southern San Andreas occurred in 1857, that section of the fault is considered a likely location for an earthquake within the next few decades."<sup>i</sup>

But San Andreas is only one of dozens of known earthquake faults that crisscross Southern California. Some of the better known faults include the Newport-Inglewood, Whittier, Chatsworth, Elsinore, Hollywood, Los Alamitos, Puente Hills, and Palos Verdes faults. Beyond the known faults, there are a potentially large number of "blind" faults that underlie the surface of Southern California. One such blind fault was involved in the 1987 Whittier Narrows Earthquake.

Although the most famous of the Faults, the San Andreas, is capable of producing an earthquake with a Magnitude of 8+ on the Richter Scale, some of the "lesser" faults have the potential to inflict greater damage on the urban core of the Los Angeles Basin. Seismologists believe that a 6.0 earthquake on the Newport-Inglewood would result in far more death and destruction than a "great" quake on the San Andreas, because the San Andreas is relatively remote from the urban centers of Southern California.

For decades, partnerships have flourished between the USGS, Cal Tech, the California Geological Survey and universities to share research and educational efforts with Californians. Tremendous earthquake mapping and mitigation efforts have been made in California in the past two decades, and public awareness has risen remarkably during this time. Major federal, state, and local government agencies and private organizations support earthquake risk reduction, and have made significant contributions in reducing the adverse impacts of earthquakes. Despite the progress, the majority of California communities remain unprepared because there is a general lack of understanding regarding earthquake hazards among Californians.

**Table 5-1: Earthquake Events in the Southern California Region**

<b>Southern California Region Earthquakes with a Magnitude 5.0 or Greater</b>			
1769	Los Angeles Basin	1916	Tejon Pass Region
1800	San Diego Region	1918	San Jacinto
1812	Wrightwood	1923	San Bernardino Region
1812	Santa Barbara Channel	1925	Santa Barbara
1827	Los Angeles Region	1933	Long Beach
1855	Los Angeles Region	1941	Carpenteria
1857	Great Fort Tejon Earthquake	1952	Kern County
1858	San Bernardino Region	1954	W. of Wheeler Ridge
1862	San Diego Region	1971	San Fernando
1892	San Jacinto or Elsinore Fault	1973	Point Mugu
1893	Pico Canyon	1986	North Palm Springs
1894	Lytle Creek Region	1987	Whittier Narrows
1894	E. of San Diego	1992	Landers
1899	Lytle Creek Region	1992	Big Bear
1899	San Jacinto and Hemet	1994	Northridge
1907	San Bernardino Region	1999	Hector Mine
1910	Glen Ivy Hot Springs		

Source:

[http://geology.about.com/gi/dynamic/offsite.htm?site=http%3A%2F%2Fpasadena.wr.usgs.gov%2Finfo%2Fcahist\\_eqs.html](http://geology.about.com/gi/dynamic/offsite.htm?site=http%3A%2F%2Fpasadena.wr.usgs.gov%2Finfo%2Fcahist_eqs.html)

To better understand the earthquake hazard, the scientific community has looked at historical records and accelerated research on those faults that are the sources of the earthquakes occurring in the Southern California region. Historical earthquake records can generally be divided into records of the pre-instrumental period and the instrumental period. In the absence of instrumentation, the detection of earthquakes is based on

observations and felt reports, and is dependent upon population density and distribution. Since California was sparsely populated in the 1800s, the detection of pre-instrumental earthquakes is relatively difficult. However, two very large earthquakes, the Fort Tejon in 1857 (7.9) and the Owens Valley in 1872 (7.6) are evidence of the tremendously damaging potential of earthquakes in Southern California. In more recent times two 7.3 earthquakes struck Southern California, in Kern County (1952) and Landers (1992). The damage from these four large earthquakes was limited because they occurred in areas which were sparsely populated at the time they happened. The seismic risk is much more severe today than in the past because the population at risk is in the millions, rather than a few hundred or a few thousand persons.

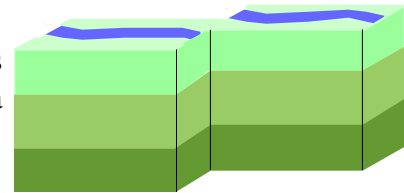
## History of Earthquake Events in Southern California

Since seismologists started recording and measuring earthquakes, there have been tens of thousands of recorded earthquakes in Southern California, most with a magnitude below three. No community in Southern California is beyond the reach of a damaging earthquake. Figure 5-1 describes the historical earthquake events that have affected Southern California.

**Figure 5-1: Causes and Characteristics of Earthquakes in Southern California**

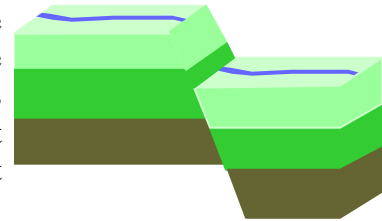
### Earthquake Faults

A fault is a fracture along between blocks of the earth's crust where either side moves relative to the other along a parallel plane to the fracture.



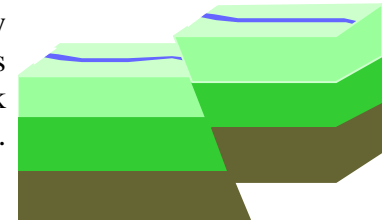
### Strike-slip

Strike-slip faults are vertical or almost vertical rifts where the earth's plates move mostly horizontally. From the observer's perspective, if the opposite block looking across the fault moves to the right, the slip style is called a right lateral fault; if the block moves left, the shift is called a left lateral fault.



### Dip-slip

Dip-slip faults are slanted fractures where the blocks mostly shift vertically. If the earth above an inclined fault moves down, the fault is called a normal fault, but when the rock above the fault moves up, the fault is called a reverse fault. Thrust faults have a reverse fault with a dip of  $45^\circ$  or less.



Dr. Kerry Sieh of Cal Tech has investigated the San Andreas Fault at Palmett Creek. "The record at Palmett Creek shows that rupture has recurred about every 130 years, on average, over the past 1500 years. But actual intervals have varied greatly, from less than 50 years to more than 300. The physical cause of such irregular recurrence remains unknown." <sup>ii</sup>

Damage from a great quake on the San Andreas would be widespread throughout Southern California.

## **Earthquake Related Hazards**

Ground shaking, landslides, liquefaction, and amplification are the specific hazards associated with earthquakes. The severity of these hazards depends on several factors, including soil and slope conditions, proximity to the fault, earthquake magnitude, and the type of earthquake.

### **Ground Shaking**

Ground shaking is the motion felt on the earth's surface caused by seismic waves generated by the earthquake. It is the primary cause of earthquake damage. The strength of ground shaking depends on the magnitude of the earthquake, the type of fault, and distance from the epicenter (where the earthquake originates). Buildings on poorly consolidated and thick soils will typically see more damage than buildings on consolidated soils and bedrock.

### **Earthquake-Induced Landslides**

Earthquake-induced landslides are secondary earthquake hazards that occur from ground shaking. They can destroy the roads, buildings, utilities, and other critical facilities necessary to respond and recover from an earthquake. Many communities in Southern California have a high likelihood of encountering such risks, especially in areas with steep slopes.

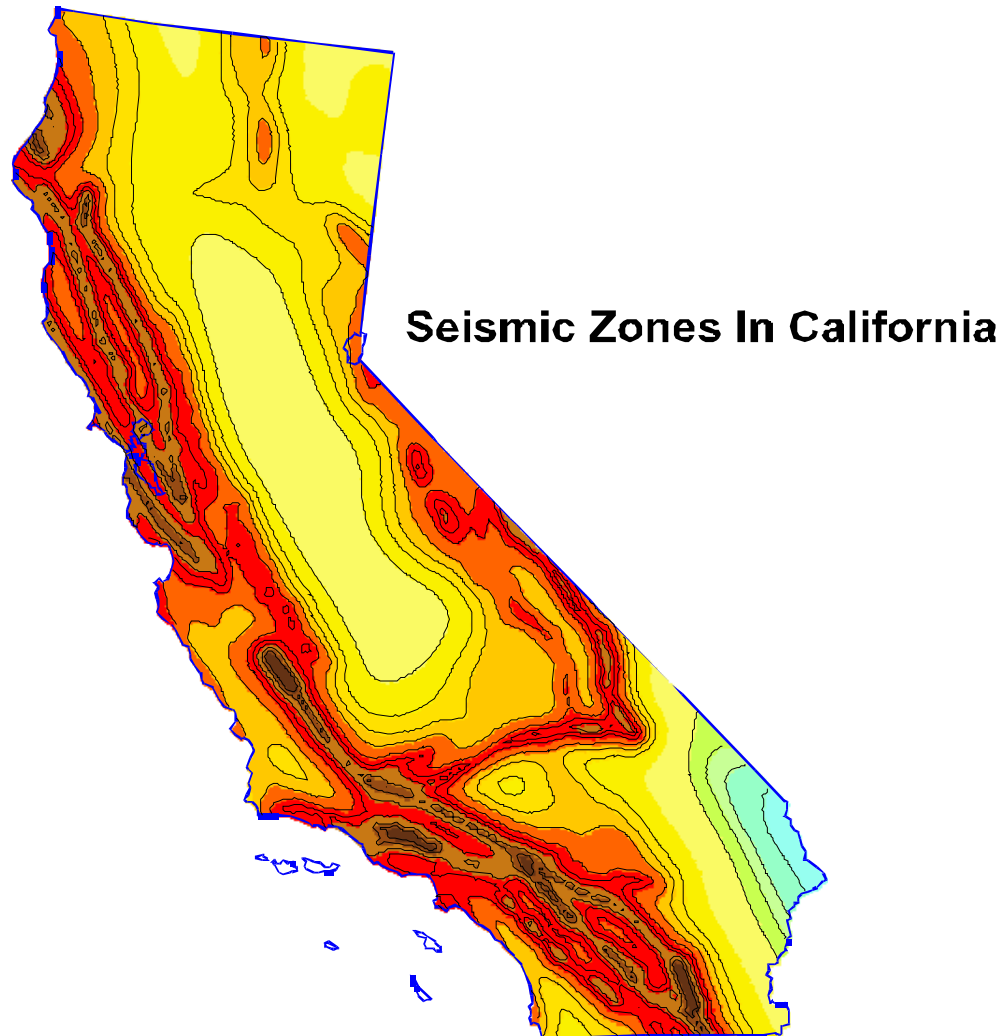
### **Liquefaction**

Liquefaction occurs when ground shaking causes wet granular soils to change from a solid state to a liquid state. This results in the loss of soil strength and the soil's ability to support weight. Buildings and their occupants are at risk when the ground can no longer support these buildings and structures. Many communities in Southern California are built on ancient river bottoms and have sandy soil. In some cases this ground may be subject to liquefaction, depending on the depth of the water table.

### **Amplification**

Soils and soft sedimentary rocks near the earth's surface can modify ground shaking caused by earthquakes. One of these modifications is amplification. Amplification increases the magnitude of the seismic waves generated by the earthquake. The amount of amplification is influenced by the thickness of geologic materials and their physical properties. Buildings and structures built on soft and unconsolidated soils can face greater risk.<sup>iii</sup> Amplification can also occur in areas with deep sediment filled basins and on ridge tops.

**Map 5-1: Seismic Zones in California**



**Darker Shaded Areas indicate Greater Potential Shaking**

**Source: USGS Website**

## **Earthquake Hazard Assessment**

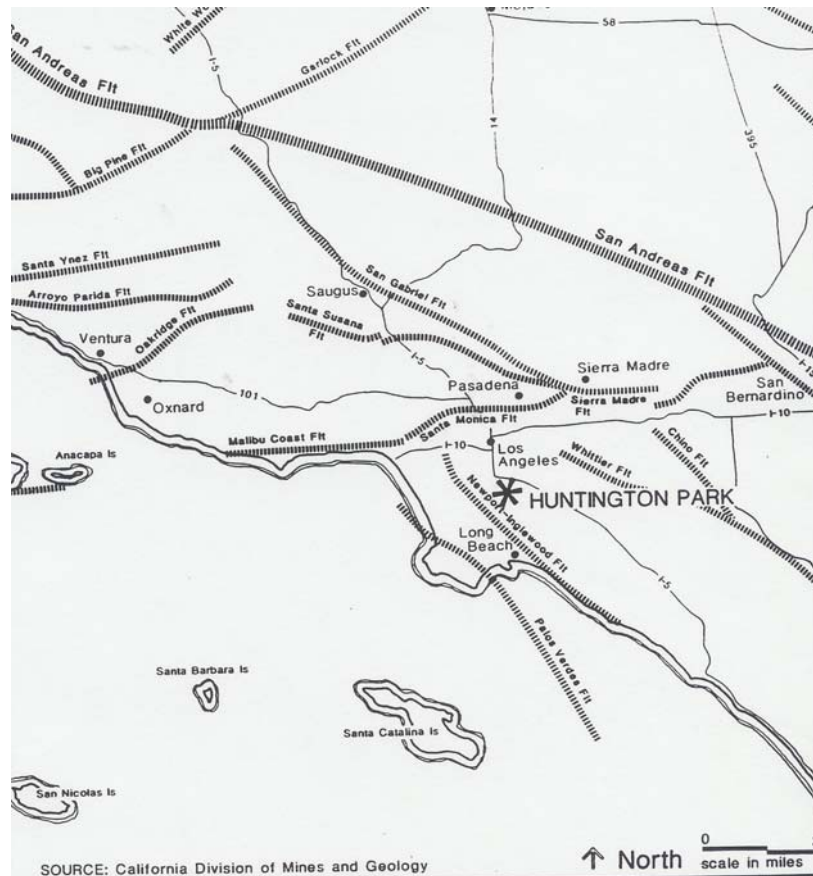
### **Hazard Identification**

Begin the subsection with the following: “Earthquake – Attachment 1 Southern California Earthquake Fault Map plots the various major faults in the region. A list of Earthquake Probable Events gathered from the Southern California Earthquake Data Center is located in Earthquake – Attachment 2”. The list includes various faults and projected magnitude earthquakes likely to impact the region. The Southern California Earthquake Data Center predicts that somewhere in Southern California (not everywhere—many residents would not be affected) should experience a magnitude 7.0 or greater earthquake about seven times each century. About half of these will be on the San Andreas "system" (the San Andreas, San Jacinto, Imperial, and Elsinore Faults) and half will be on other faults. The equivalent probability in the next 30 years is 85%.

In California, many agencies are focused on seismic safety issues: the State’s Seismic Safety Commission, the Applied Technology Council, Governor’s Office of Emergency Services, United States Geological Survey, Cal Tech, the California Geological Survey as well as a number of universities and private foundations.

These organizations, in partnership with other state and federal agencies, have undertaken a rigorous program in California to identify seismic hazards and risks including active fault identification, bedrock shaking, tsunami inundation zones, ground motion amplification, liquefaction, and earthquake induced landslides. Seismic hazard maps have been published and are available for many communities in California through the State Division of Mines and Geology. Map 5-2 illustrates the known earthquake faults in Southern California.

**Map 5-2: Regional Fault Zones (Source: City of Huntington Park General Plan)**



As identified in the City's General Plan, the major faults that have the potential to affect the greater Los Angeles Basin, and therefore the City of Huntington Park are the:

San Andreas  
Newport-Inglewood  
Sierra Madre  
Whittier  
Elsinore  
San Fernando  
San Jacinto

In California, each earthquake is followed by revisions and improvements in the Building Codes. The 1933 Long Beach Earthquake resulted in the Field Act, affecting school construction. The 1971 Sylmar Earthquake brought another set of increased structural standards. Similar re-evaluations occurred after the 1989 Loma Prieta and 1994 Northridge Earthquakes. These code changes have resulted in stronger and more earthquake resistant structures.

The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 to mitigate the hazard of surface faulting to structures for human occupancy. This state law was a direct result of the 1971 San Fernando Earthquake, which was associated with extensive surface fault ruptures that damaged numerous homes, commercial buildings, and other structures. Surface rupture is the most easily avoided seismic hazard.<sup>iv</sup>

The Seismic Hazards Mapping Act, passed in 1990, addresses non-surface fault rupture earthquake hazards, including liquefaction and seismically induced landslides.<sup>v</sup> The State Department of Conservation operates the Seismic Mapping Program for California. Extensive information is available at their website: <http://gmw.consrv.ca.gov/shmp/index.htm>

### **Vulnerability Assessment**

The effects of earthquakes span a large area, and large earthquakes occurring in many parts of the Southern California region would probably be felt throughout the region. However, the degree to which the earthquakes are felt, and the damages associated with them may vary. At risk from earthquake damage are large stocks of old buildings and bridges: many high tech and hazardous materials facilities: extensive sewer, water, and natural gas pipelines; earth dams; petroleum pipelines; and other critical facilities and private property located in the county. The relative or secondary earthquake hazards, which are liquefaction, ground shaking, amplification, and earthquake-induced landslides, can be just as devastating as the earthquake.

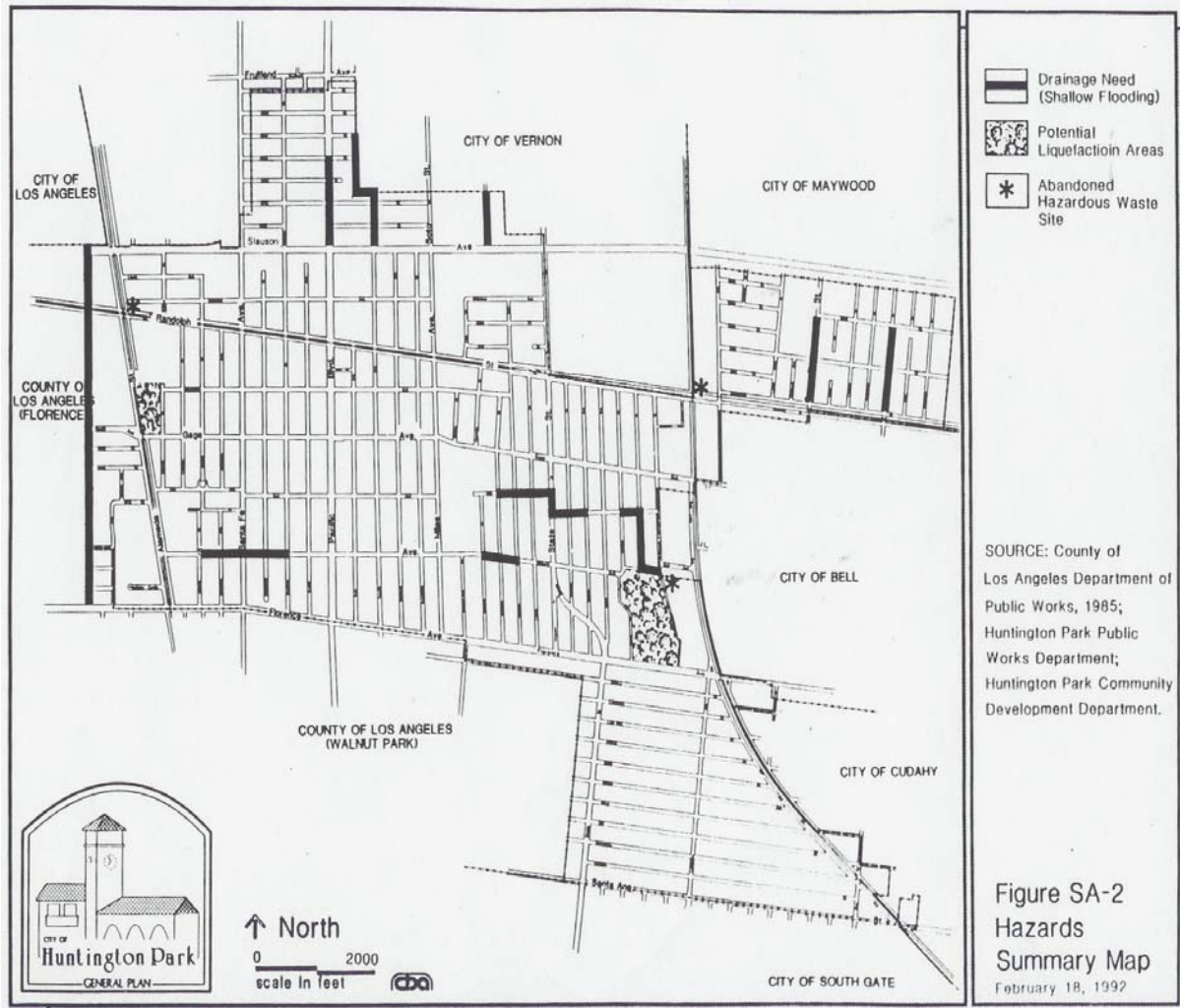
The California Geological Survey has identified areas most vulnerable to liquefaction. Liquefaction occurs when ground shaking causes wet granular soils to change from a solid state to a liquid state. This results in the loss of soil strength and the soil's ability to support weight. Buildings and their occupants are at risk when the ground can no longer support these buildings and structures.

The City of Huntington Park has liquefaction zones as shown on Map 5-3: Potential Liquefaction Areas in the City of Huntington Park. The following two areas are identified in the City's General Plan as potential liquefaction zones:

**Zone 1:** The area along Florence Avenue and Hewell Street

**Zone 2:** Along Gage and Regent Avenues, east of the railroad right of way.

### **Map 5-3: Potential Liquefaction Areas in the City of Huntington Park (Source: City of Huntington Park General Plan)**





Southern California has many active landslide areas, and a large earthquake could trigger accelerated movement in these slide areas, in addition to jarring loose other unknown areas of landslide risk.

## **Risk Analysis**

Risk analysis is the third phase of a hazard assessment. Risk analysis involves estimating the damage and costs likely to be experienced in a geographic area over a period of time<sup>vi</sup>. Factors included in assessing earthquake risk include population and property distribution in the hazard area, the frequency of earthquake events, landslide susceptibility, buildings, infrastructure, and disaster preparedness of the region. This type of analysis can generate estimates of the damages to the region due to an earthquake event in a specific location. FEMA's software program, HAZUS, uses mathematical formulas and information about building stock, local geology and the location and size of potential earthquakes, economic data, and other information to estimate losses from a potential earthquake.<sup>vii</sup> The HAZUS software is available from FEMA at no cost.

For greater Southern California there are multiple worst case scenarios, depending on which fault might rupture, and which communities are in proximity to the fault. But damage will not necessarily be limited to immediately adjoining communities. Depending on the hypocenter of the earthquake, seismic waves may be transmitted through the ground to unsuspecting communities. In the Northridge 1994 earthquake, Santa Monica suffered extensive damage, even though there was a range of mountains between it and the origin of the earthquake.

Damages for a large earthquake almost anywhere in Southern California are likely to run into the billions of dollars. Although building codes are some of the most stringent in the world, ten's of thousands of older existing buildings were built under much less rigid codes. California has laws affecting unreinforced masonry buildings (URM's) and although many building owners have retrofitted their buildings, hundreds of pre-1933 buildings still have not been brought up to current standards. The City of Huntington Park's General Plan states that in 1990 there were almost 90 unreinforced masonry buildings in the City. The majority of these buildings were located downtown along the Pacific Boulevard. However, in response to the City's Earthquake Hazard Abatement Program, most of the buildings now have retrofit plans.

Non-structural bracing of equipment and contents is often the most cost-effective type of seismic mitigation. Inexpensive bracing and anchoring may be the most cost effective way to protect expensive equipment. Non-structural bracing of equipment and furnishings will also reduce the chance of injury for the occupants of a building.

## **Community Earthquake Issues**

### **What is Susceptible to Earthquakes?**

Earthquake damage occurs because humans have built structures that cannot withstand severe shaking. Buildings, airports, schools, and lifelines (highways and utility lines) suffer damage in earthquakes and can cause death or injury to humans. The welfare of homes, major businesses, and public infrastructure is very important. Addressing the reliability of buildings, critical facilities, and infrastructure, and understanding the potential costs to government, businesses, and individuals as a result of an earthquake, are challenges faced by the city.

### **Dams**

There are a total of 103 dams in Los Angeles County, owned by 23 agencies or organizations, ranging from the Federal government to Homeowner's Associations.<sup>viii</sup> These dams hold billions of gallons of water in reservoirs. Releases of water from the major reservoirs are designed to protect Southern California from flood waters and to store domestic water. Seismic activity can compromise the dam structures, and the resultant flooding could cause catastrophic flooding. Following the 1971 Sylmar Earthquake the Lower Van Norman Dam showed signs of structural compromise, and tens of thousands of persons had to be evacuated until the dam could be drained. The dam has never been refilled.

The City's Emergency Operations Plan states that the Hansen Dam and the Sepulveda Dam could have potential impact on the City of Huntington Park. The Emergency Operations Plan also gives the following descriptions of how dam inundation would affect the City.

The City is located 24 miles downstream of the Hansen Dam. In the event of a dam failure the waters would reach the City approximately 16 hours after the breach at a depth of two feet. The flood would inundate the northern section of the city first and then affect the rest of the city.

The Sepulveda Dam is located on the Los Angeles River 20 upstream of the City of Huntington Park. If the dam were to fail, the water would flow in a southeasterly direction reaching the city within 9 hours at a depth of two feet. The water would reach the northwest section of the city first and then inundate the rest of the city.

### **Buildings**

The built environment is susceptible to damage from earthquakes. Buildings that collapse can trap and bury people. Lives are at risk and the cost to clean up the damages is great. In most California communities, including the City of Huntington Park, many buildings were built before 1993 when building codes were not as strict. In addition, retrofitting is not required except under certain conditions and can be expensive. Therefore, the number of buildings at risk remains high. The California Seismic Safety Commission makes annual reports on the progress of the retrofitting of un-reinforced masonry buildings. Huntington Park has had all but two of the un-reinforced masonry

structures over one story built before 1932 retrofitted. The two that are not retrofitted are vacant. Few other structures have been retrofitted.

### **Infrastructure and Communication**

Residents of Huntington Park commute frequently by automobiles and public transportation such as buses and light rail. An earthquake can greatly damage bridges and roads, hampering emergency response efforts and the normal movement of people and goods. Damaged infrastructure strongly affects the economy of the community because it disconnects people from work, school, food, and leisure, and separates businesses from their customers and suppliers.

### **Bridge Damage**

Even modern bridges can sustain damage during earthquakes, leaving them unsafe for use. Some bridges have failed completely due to strong ground motion. Bridges are a vital transportation link - with even minor damages making some areas inaccessible. Because bridges vary in size, materials, location and design, any given earthquake will affect them differently. Bridges built before the mid-1970's have a significantly higher risk of suffering structural damage during a moderate to large earthquake compared with those built after 1980 when design improvements were made.

Much of the interstate highway system was built in the mid to late 1960's. The bridges in the City of Huntington Park are state, county or privately owned (including railroad bridges). Caltrans has retrofitted most bridges on the freeway systems; however there are still some county maintained bridges that are not retrofitted. The FHWA requires that bridges on the National Bridge Inventory be inspected every 2 years. Caltrans checks when the bridges are inspected because they administer the Federal funds for bridge projects. The only bridges in Huntington Park are those that cross the Alameda Corridor train facility and they are new bridges that are less than five years old. The Alameda Corridor is responsible for these bridges but if they are damaged and inoperable they will cause east-west traffic problems.

### **Damage to Lifelines**

Lifelines are the connections between communities and outside services. They include water and gas lines, transportation systems, electricity, and communication networks. Ground shaking and amplification can cause pipes to break open, power lines to fall, roads and railways to crack or move, and radio and telephone communication to cease. Disruption to transportation makes it especially difficult to bring in supplies or services. Lifelines need to be usable after earthquake to allow for rescue, recovery, and rebuilding efforts and to relay important information to the public.

### **Disruption of Critical Services**

Critical facilities include police stations, fire stations, hospitals, shelters, and other facilities that provide important services to the community. These facilities and their services need to be functional after an earthquake event. Many critical facilities are housed in older buildings that are not up to current seismic codes. See Section 1, Introduction for critical and essential facilities vulnerable to earthquakes.

**Businesses**

Seismic activity can cause great loss to businesses, both large-scale corporations and small retail shops. When a company is forced to stop production for just a day, the economic loss can be tremendous, especially when its market is at a national or global level. Seismic activity can create economic loss that presents a burden to large and small shop owners who may have difficulty recovering from their losses.

Forty percent of businesses do not reopen after a disaster and another twenty-five percent fail within one year according to the Federal Emergency Management Agency (FEMA). Similar statistics from the United States Small Business Administration indicate that over ninety percent of businesses fail within two years after being struck by a disaster.<sup>ix</sup>

**Individual Preparedness**

Because the potential for earthquake occurrences and earthquake related property damage is relatively high in the City of Huntington Park, increasing individual preparedness is a significant need. Strapping down heavy furniture, water heaters, and expensive personal property, as well as being earthquake insured, and anchoring buildings to foundations are just a few steps individuals can take to prepare for an earthquake.

**Death and Injury**

Death and injury can occur both inside and outside of buildings due to collapsed buildings falling equipment, furniture, debris, and structural materials. Downed power lines and broken water and gas lines can also endanger human life.

**Fire**

Downed power lines or broken gas mains may trigger fires. When fire stations suffer building or lifeline damage, quick response to extinguish fires is less likely. Furthermore, major incidents will demand a larger share of resources, and initially smaller fires and problems will receive little or insufficient resources in the initial hours after a major earthquake event. Loss of electricity may cause a loss of water pressure in some communities, further hampering fire-fighting ability.

**Debris**

After damage to a variety of structures, much time is spent cleaning up bricks, glass, wood, steel or concrete building elements, office and home contents, and other materials. Developing a strong debris management strategy is essential in post-disaster recovery. Disasters do not exempt the City of Huntington Park from compliance with AB 939 regulations.

**Existing Mitigation Activities**

Existing mitigation activities include current mitigation programs and activities that are being implemented by county, regional, state, or federal agencies or organizations.

**City of Huntington Park Codes**

Implementation of earthquake mitigation policy most often takes place at the local government level. The City of Huntington Park Department of Building and Safety

enforces building codes pertaining to earthquake hazards. The following sections of the UBC address the earthquake hazard:

- 1605.1 (Distribution of Horizontal Shear);
- 1605.2 (Stability against Overturning);
- 1626 (Seismic);
- 1605.3 (Anchorage); and
- 1632, 1633, 1633.9 deal with specific earthquake hazards.

The City of Huntington Park Planning Department enforces the zoning and land use regulations relating to earthquake hazards.

Generally, these codes seek to discourage development in areas that could be prone to flooding, landslide, wildfire and/or seismic hazards; and where development is permitted, that the applicable construction standards are met. Developers in hazard-prone areas may be required to retain a qualified professional engineer to evaluate level of risk on the site and recommend appropriate mitigation measures.

### **Coordination among Building Officials**

The City of Huntington Park Building Code sets the minimum design and construction standards for new buildings. In 2001 California Building Code up-graded the structural requirements and the City of Huntington Park adopted the most recent seismic standards in its building code, which requires that new buildings be built at a higher seismic standard.

Since 1997, the City of Huntington Park has also required that site-specific seismic hazard investigations be performed for new essential facilities, major structures, hazardous facilities, and special occupancy structures such as schools, hospitals, and emergency response facilities.

### **Businesses/Private Sector**

Natural hazards have a devastating impact on businesses. In fact, of all businesses which close following a disaster, more than forty-three percent never reopen, and an additional twenty-nine percent close for good within the next two years.<sup>x</sup> The Institute of Business and Home Safety has developed “Open for Business”, which is a disaster planning toolkit to help guide businesses in preparing for and dealing with the adverse affects natural hazards. The kit integrates protection from natural disasters into the company's risk reduction measures to safeguard employees, customers, and the investment itself. The guide helps businesses secure human and physical resources during disasters, and helps to develop strategies to maintain business continuity before, during, and after a disaster occurs.

### **Hospitals**

“The Alfred E. Alquist Hospital Seismic Safety Act (“Hospital Act”) was enacted in 1973 in response to the moderate Magnitude 6.6 1971 Sylmar Earthquake when four major hospital campuses were severely damaged and evacuated. Two hospital buildings

collapsed killing forty seven people. Three others were killed in another hospital that nearly collapsed.

In approving the Act, the Legislature noted that: “Hospitals, that house patients who have less than the capacity of normally healthy persons to protect themselves, and that must be reasonably capable of providing services to the public after a disaster, shall be designed and constructed to resist, insofar as practical, the forces generated by earthquakes, gravity and winds.” (Health and Safety Code Section 129680)

When the Hospital Act was passed in 1973, the State anticipated that, based on the regular and timely replacement of aging hospital facilities, the majority of hospital buildings would be in compliance with the Act’s standards within 25 years. However, hospital buildings were not, and are not, being replaced at that anticipated rate. In fact, the great majority of the State’s urgent care facilities are now more than 40 years old.

The moderate Magnitude 6.7 1994 Northridge Earthquake caused \$3 billion in hospital-related damage and evacuations. Twelve hospital buildings constructed before the Act were cited (red tagged) as unsafe for occupancy after the earthquake. Those hospitals that had been built in accordance with the 1973 Hospital Act were very successful in resisting structural damage. However, nonstructural damage (for example, plumbing and ceiling systems) was still extensive in those post-1973 buildings.

Senate Bill 1953 (“SB 1953”), enacted in 1994 after the Northridge Earthquake, expanded the scope of the 1973 Hospital Act. Under SB 1953, all hospitals are required, as of January 1, 2008, to survive earthquakes without collapsing or posing the threat of significant loss of life. The 1994 Act further mandates that all existing hospitals be seismically evaluated, and retrofitted, if needed, by 2030, so that they are in substantial compliance with the Act (which requires that the hospital buildings be reasonably capable of providing services to the public after disasters). SB 1953 applies to all urgent care facilities (including those built prior to the 1973 Hospital Act) and affects approximately 2,500 buildings on 475 campuses.

SB 1953 directed the Office of Statewide Health Planning and Development (“OSHPD”), in consultation with the Hospital Building Safety Board, to develop emergency regulations including “...earthquake performance categories with sub gradations for risk to life, structural soundness, building contents, and nonstructural systems that are critical to providing basic services to hospital inpatients and the public after a disaster.” (Health and Safety Code Section 130005)

### The Seismic Safety Commission Evaluation of the State’s Hospital Seismic Safety Policies

In 2001, recognizing the continuing need to assess the adequacy of policies, and the application of advances in technical knowledge and understanding, the California Seismic Safety Commission created an Ad Hoc Committee to re-examine the compliance with the Alquist Hospital Seismic Safety Act. The formation of the Committee was also

prompted by the recent evaluations of hospital buildings reported to OSHPD that revealed that a large percentage (40%) of California's operating hospitals are in the highest category of collapse risk." <sup>xi</sup>

### **California Earthquake Mitigation Legislation**

California is painfully aware of the threats it faces from earthquakes. Dating back to the 19<sup>th</sup> Century, Californians have been killed, injured, and lost property as a result of earthquakes. As the State's population continues to grow, and urban areas become even more densely developed, the risk will continue to increase. For decades the legislature has passed laws to strengthen the built environment and protect the citizens. Table 5-4 provides a sampling of some of the 200 plus laws in the State's codes.

**Table 5-4: Partial List of the Over 200 California Laws on Earthquake Safety**

Government Code Section 8870-8870.95	Creates Seismic Safety Commission.
Government Code Section 8876.1-8876.10	Established the California Center for Earthquake Engineering Research.
Public Resources Code Section 2800-2804.6	Authorized a prototype earthquake prediction system along the Central San Andreas Fault near the City of Parkfield.
Public Resources Code Section 2810-2815	Continued the Southern California Earthquake Preparedness Project and the Bay Area Regional Earthquake Preparedness Project.
Health and Safety Code Section 16100-16110	The Seismic Safety Commission and State Architect, will develop a state policy on acceptable levels of earthquake risk for new and existing state-owned buildings.
Government Code Section 8871-8871.5	Established the California Earthquake Hazards Reduction Act of 1986.
Health and Safety Code Section 130000-130025	Defined earthquake performance standards for hospitals.
Public Resources Code Section 2805-2808	Established the California Earthquake Education Project.
Government Code Section 8899.10-8899.16	Established the Earthquake Research Evaluation Conference.
Public Resources Code Section 2621-2630 2621.	Established the Alquist-Priolo Earthquake Fault Zoning Act.
Government Code Section 8878.50-8878.52 8878.50.	Created the Earthquake Safety and Public Buildings Rehabilitation Bond Act of 1990.
Education Code Section 35295-35297 35295.	Established emergency procedure systems in kindergarten through grade 12 in all the public or private schools.
Health and Safety Code Section 19160-19169	Established standards for seismic retrofitting of unreinforced masonry buildings.
Health and Safety Code Section 1596.80-1596.879	Required all child day care facilities to include an Earthquake Preparedness Checklist as an attachment to their disaster plan.

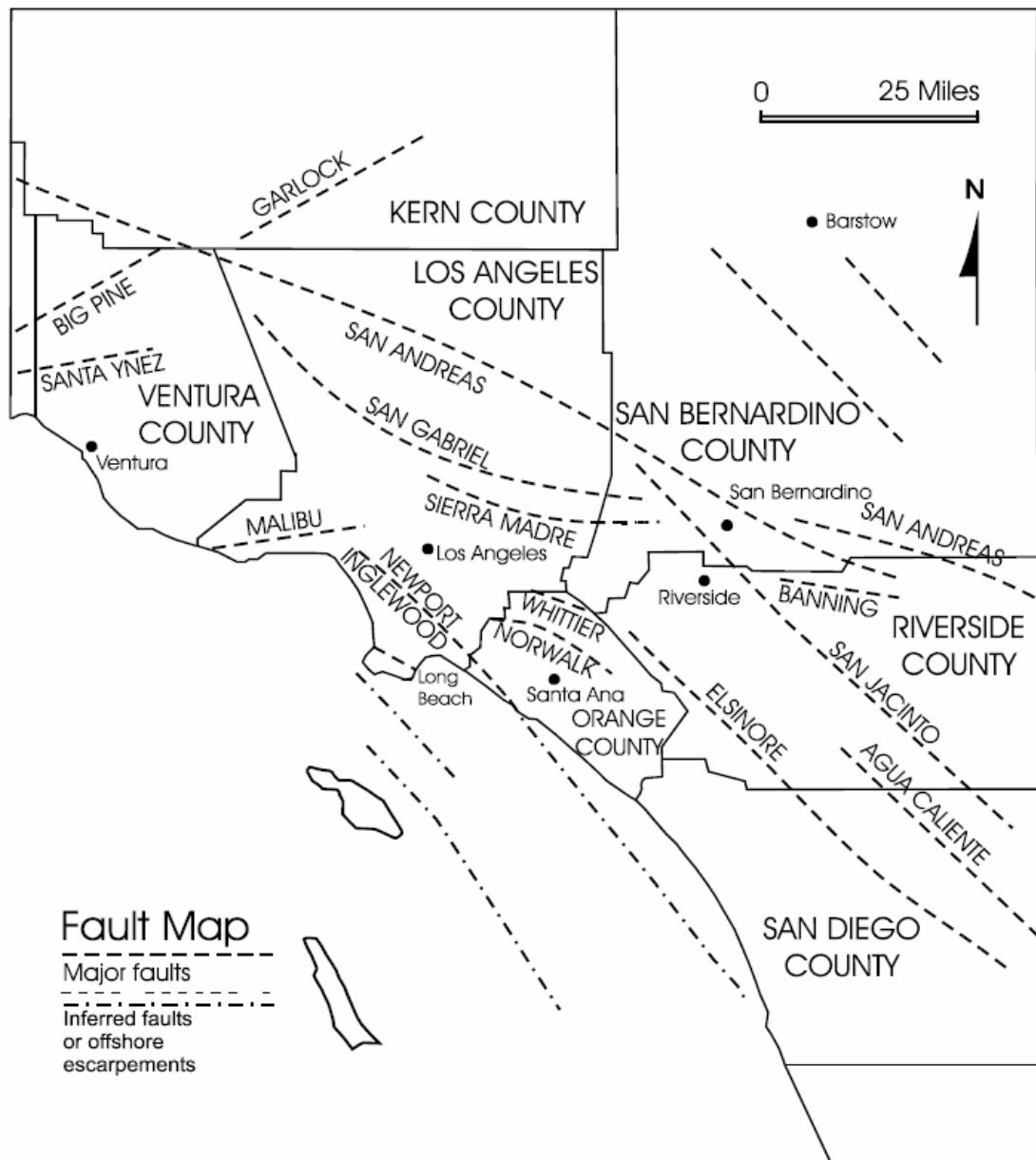
Source:  
<http://www.leginfo.ca.gov/calaw.html>

### **Earthquake Education**

Earthquake research and education activities are conducted at several major universities in the Southern California region, including Cal Tech, USC, UCLA, UCSB, UCI, and UCSB. The local clearinghouse for earthquake information is the Southern California Earthquake Center located at the University of Southern California, Los Angeles, CA 90089, Telephone: (213) 740-5843, Fax: (213) 740-0011, Email: SCEinfo@usc.edu, Website: <http://www.scec.org>. The Southern California Earthquake Center (SCEC) is a community of scientists and specialists who actively coordinate research on earthquake hazards at nine core institutions, and communicate earthquake information to the public. SCEC is a National Science Foundation (NSF) Science and Technology Center and is co-funded by the United States Geological Survey (USGS).

In addition, Los Angeles County along with other Southern California counties, sponsors the Emergency Survival Program (ESP), an educational program for learning how to prepare for earthquakes and other disasters. Many school districts have very active emergency preparedness programs that include earthquake drills and periodic disaster response team exercises.

# Southern California Earthquake Fault Map



## Earthquake Probable Events (Source: Southern California Earthquake Data Center)

### Elsinore Fault Zone

TYPE OF FAULTING: right-lateral strike-slip

LENGTH: about 180 km (not including the Whittier, Chino, and Laguna Salada faults)

NEARBY COMMUNITIES: Temecula, Lake Elsinore, Julian

LAST MAJOR RUPTURE: May 15, 1910; Magnitude 6 -- no surface rupture found

SLIP RATE: roughly 4.0 mm/yr

INTERVAL BETWEEN MAJOR RUPTURES: roughly 250 years

PROBABLE MAGNITUDES:  $M_w$ 6.5 - 7.5

MOST RECENT SURFACE RUPTURE: 18th century A.D.(?)

### Newport-Inglewood Fault Zone

TYPE OF FAULTING: right-lateral; local reverse slip associated with fault steps

LENGTH: 75 km

NEAREST COMMUNITIES: Culver City, Inglewood, Gardena, Compton, Signal Hill, Long Beach, Seal Beach, Huntington Beach, Newport Beach, Costa Mesa

MOST RECENT MAJOR RUPTURE: March 10, 1933,  $M_w$ 6.4 (but no surface rupture)

SLIP RATE: 0.6 mm/yr

INTERVAL BETWEEN MAJOR RUPTURES: unknown

PROBABLE MAGNITUDES:  $M_w$ 6.0 - 7.4

OTHER NOTES: Surface trace is discontinuous in the Los Angeles Basin, but the fault zone can easily be noted there by the existence of a chain of low hills extending from Culver City to Signal Hill. South of Signal Hill, it roughly parallels the coastline until just south of Newport Bay, where it heads offshore, and becomes the Newport-Inglewood - Rose Canyon fault zone.

### San Andreas Fault Zone

TYPE OF FAULT: right-lateral strike-slip

LENGTH: 1200 km 550 km south from Parkfield; 650km northward

NEARBY COMMUNITY: Parkfield, Frazier Park, Palmdale, Wrightwood, San Bernardino, Banning, Indio

LAST MAJOR RUPTURE: January 9, 1857 (Mojave segment); April 18, 1906 (Northern segment)

SLIP RATE: about 20 to 35 mm per year

INTERVAL BETWEEN MAJOR RUPTURES: average of about 140 years on the Mojave segment; recurrence interval varies greatly -- from under 20 years (at Parkfield only) to over 300 years

PROBABLE MAGNITUDES:  $M_w$ 6.8 - 8.0

### San Fernando Fault Zone

TYPE OF FAULTING: thrust

LENGTH: 17 km

NEAREST COMMUNITIES: San Fernando, Sunland

LAST MAJOR RUPTURE: February 9, 1971,  $M_w$ 6.6

SLIP RATE: 5 mm/yr (?)

INTERVAL BETWEEN MAJOR RUPTURES: roughly 200 years

PROBABLE MAGNITUDES:  $M_w$ 6.0 - 6.8

OTHER NOTES: Dip is to the north. The slip rate is not well known, but trenching studies indicate recurrence interval as between 100 and 300 years.

### San Jacinto Fault Zone

TYPE OF FAULTING : right-lateral strike-slip; minor right-reverse

LENGTH: 210 km, including Coyote Creek fault

NEARBY COMMUNITIES: Lytle Creek, San Bernardino, Loma Linda, San Jacinto, Hemet, Anza, Borrego Springs, Ocotillo Wells

MOST RECENT SURFACE RUPTURE: within the last few centuries; April 9, 1968,  $M_w$  6.5 on Coyote Creek segment

SLIP RATE: typically between 7 and 17 mm/yr

INTERVAL BETWEEN SURFACE RUPTURES: between 100 and 300 years, per segment

PROBABLE MAGNITUDES:  $M_w$  6.5 - 7.5

### **Sierra Madre Fault System**

TYPE OF FAULTING: reverse - ANIMATION

LENGTH: the zone is about 55 km long;

total length of main fault segments is about 75 km, with each segment measuring roughly 15 km long

NEARBY COMMUNITIES: Sunland, Altadena, Sierra Madre, Monrovia, Duarte, Glendora

MOST RECENT SURFACE RUPTURE: Holocene

SLIP RATE: between 0.36 and 4 mm/yr

INTERVAL BETWEEN SURFACE RUPTURES: several thousand years (?)

PROBABLE MAGNITUDES:  $M_w$  6.0 - 7.0 (?)

OTHER NOTES: This fault zone dips to the north. It was not the fault responsible for the 1991 Sierra Madre earthquake.

### **Whittier Fault**

TYPE OF FAULTING: right-lateral strike-slip with some reverse slip

LENGTH: about 40 km

NEARBY COMMUNITIES: Yorba Linda, Hacienda Heights, Whittier

MOST RECENT SURFACE RUPTURE: Holocene

SLIP RATE: between 2.5 and 3.0 mm/yr

INTERVAL BETWEEN MAJOR RUPTURES: unknown

PROBABLE MAGNITUDES:  $M_w$  6.0 - 7.2

OTHER NOTES: The Whittier fault dips toward the northeast.

## End Notes

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- <sup>i</sup> <http://pubs.usgs.gov/gip/earthq3/when.html>
- <sup>ii</sup> <http://www.gps.caltech.edu/~sieh/home.html>
- <sup>iii</sup> Planning for Natural Hazards: The California Technical Resource Guide, Department of Land Conservation and Development (July 2000)
- <sup>iv</sup> <http://www.consrv.ca.gov/CGS/rghm/ap/>
- <sup>v</sup> Ibid
- <sup>vi</sup> Burby, R. (Ed.) Cooperating with Nature: Confronting Natural Hazards with Land Use Planning for Sustainable Communities (1998), Washington D.C., Joseph Henry Press.
- <sup>vii</sup> FEMA HAZUS <http://www.fema.gov/hazus/hazus2.htm> (May 2001).
- <sup>viii</sup> Source: Los Angeles County Public Works Department, March 2004
- <sup>ix</sup> [http://www.chamber101.com/programs\\_committee/natural\\_disasters/DisasterPreparedness/Forty.htm](http://www.chamber101.com/programs_committee/natural_disasters/DisasterPreparedness/Forty.htm)
- <sup>x</sup> Institute for Business and Home Safety Resources (April 2001),
- <sup>xi</sup> [http://www.seismic.ca.gov/pub/CSSC\\_2001-04\\_Hospital.pdf](http://www.seismic.ca.gov/pub/CSSC_2001-04_Hospital.pdf)

# Section 6:

## Windstorm Hazards in the City of Huntington Park

### **Why are Severe Windstorms a Threat to the City of Huntington Park?**

Severe wind storms pose a significant risk to life and property in the region by creating conditions that disrupt essential systems such as public utilities, telecommunications, and transportation routes. High winds can and do occasionally cause tornado-like damage to local homes and businesses. Severe windstorms can present a very destabilizing effect on the dry brush that covers local hillsides and urban wildland interface areas. High winds can have destructive impacts, especially to trees, power lines, and utility services.

**Figure 6-1: Santa Ana Winds (Source: NASA's "Observatorium")**



### **Santa Ana Winds and Tornado-Like Wind Activity**

Based on local history, most incidents of high wind in the City of Huntington Park are the result of the Santa Ana wind conditions. While high impact wind incidents are not frequent in the area, significant Santa Ana Wind events and sporadic tornado activity have been known to negatively impact the local community.

### **What are Santa Ana Winds?**

“Santa Ana winds are generally defined as warm, dry winds that blow from the east or northeast (offshore). These winds occur below the passes and canyons of the coastal ranges of Southern California and in the Los Angeles basin. Santa Ana winds often blow with exceptional speed in the Santa Ana Canyon (the canyon from which it derives its name). Forecasters at the National Weather Service offices in Oxnard and San Diego usually place speed minimums on these winds and reserve the use of "Santa Ana" for winds greater than 25 knots.”<sup>1</sup> These winds accelerate to speeds of 35 knots as they move through canyons and passes, with gusts to 50 or even 60 knots.

“The complex topography of Southern California combined with various atmospheric conditions create numerous scenarios that may cause widespread or isolated Santa Ana events. Commonly, Santa Ana winds develop when a region of high pressure builds over the Great Basin (the high plateau east of the Sierra Mountains and west of the Rocky Mountains including most of Nevada and Utah). Clockwise circulation around the center of this high pressure area forces air downslope from the high plateau. The air warms as it descends toward the California coast at the rate of 5 degrees F per 1000 feet due to compressional heating. Thus, compressional heating provides the primary source of warming. The air is dry since it originated in the desert, and it dries out even more as it is heated.”<sup>2</sup>

These regional winds typically occur from October to March, and, according to most accounts are named either for the Santa Ana River Valley where they originate or for the Santa Ana Canyon, southeast of Los Angeles, where they pick up speed.

### What are Tornadoes?

Tornadoes are spawned when there is warm, moist air near the ground, cool air aloft, and winds that speed up and change direction. An obstruction, such as a house, in the path of the wind causes it to change direction. This change increases pressure on parts of the house, and the combination of increased pressures and fluctuating wind speeds creates stresses that frequently cause structural failures.

In order to measure the intensity and wind strength of a tornado, Dr. T. Theodore Fujita developed the Fujita Tornado Damage Scale. This scale compares the estimated wind velocity with the corresponding amount of suspected damage. The scale measures six classifications of tornadoes with increasing magnitude from an “F0” tornado to a “F6+” tornado.

**Table 6-1: Fujita Tornado Damage Scale**

Scale	Wind Estimate (mph)	Typical Damage
F0	< 73	<b>Light damage.</b> Some damage to chimneys and TV antennas; breaks twigs off trees; pushes over shallow-rooted trees.
F1	73-112	<b>Moderate damage.</b> Peels surface off roofs; windows broken; light trailer houses pushed or overturned; some trees uprooted or snapped; moving automobiles pushed off the road. 74 mph is the beginning of hurricane wind speed.
F2	113-157	<b>Considerable damage.</b> Roofs torn off frame houses leaving strong upright walls; weak buildings in rural areas demolished; trailer houses destroyed; large trees snapped or uprooted; railroad boxcars pushed over; light object missiles generated; cars blown off highway.
F3	158-206	<b>Severe damage.</b> Roofs and some walls torn off frame houses; some rural buildings completely demolished; trains overturned; steel-framed

		hangar-warehouse-type structures torn; cars lifted off the ground; most trees in a forest uprooted snapped, or leveled.
F4	207-260	<b>Devastating damage.</b> Whole frame houses leveled, leaving piles of debris; steel structures badly damaged; trees debarked by small flying debris; cars and trains thrown some distances or rolled considerable distances; large missiles generated.
F5	261-318	<b>Incredible damage.</b> Whole frame houses tossed off foundations; steel-reinforced concrete structures badly damaged; automobile-sized missiles generated; trees debarked; incredible phenomena can occur.
F6-F12	319 to sonic	<b>Inconceivable damage.</b> Should a tornado with the maximum wind speed in excess of F5 occur, the extent and types of damage may not be conceived. A number of missiles such as iceboxes, water heaters, storage tanks, automobiles, etc. will create serious secondary damage on structures.

Source: <http://weather.latimes.com/tornadoFAQ.asp>

### Microbursts

Unlike tornados, microbursts are strong, damaging winds which strike the ground and often give the impression a tornado has struck. They frequently occur during intense thunderstorms. The origin of a microburst is downward moving air from a thunderstorm's core. But unlike a tornado, they affect only a rather small area.

University of Chicago storm researcher Dr Ted Fujita first coined the term “downburst” to describe strong, downdraft winds flowing out of a thunderstorm cell that he believed were responsible for the crash of Eastern Airlines Flight 66 in June of 1975.<sup>3</sup>

A downburst is a straight-direction surface wind in excess of 39 mph caused by a small-scale, strong downdraft from the base of convective thundershowers and thunderstorms. In later investigations into the phenomena he defined two sub-categories of downbursts: the larger macrobursts and small microbursts.<sup>4</sup>

Macrobursts are downbursts with winds up to 117 mph which spread across a path greater than 2.5 miles wide at the surface and which last from 5 to 30 minutes. The microburst, on the other hand is confined to an even smaller area, less than 2.5 miles in diameter from the initial point of downdraft impact. An intense microburst can result in damaging winds near 270 km/hr (170 mph) and often last for less than five minutes.<sup>5</sup>

“Downbursts of all sizes descend from the upper regions of severe thunderstorms when the air accelerates downward through either exceptionally strong evaporative cooling or by very heavy rain which drags dry air down with it. When the rapidly descending air strikes the ground, it spreads outward in all directions, like a fast-running faucet

stream hitting the sink bottom. When the microburst wind hits an object on the ground such as a house, garage or tree, it can flatten the buildings and strip limbs and branches from the tree. After striking the ground, the powerful outward running gust can wreak further havoc along its path. Damage associated with a microburst is often mistaken for the work of a tornado, particularly directly under the microburst. However, damage patterns away from the impact area are characteristic of straight-line winds rather than the twisted pattern of tornado damage.”<sup>6</sup>

Tornados, like those that occur every year in the Midwest and Southeast parts of the United States, are a rare phenomenon in most of California, with most tornado-like activity coming from micro-bursts.

### Local History of Windstorm Events

While the effects of Santa Ana Winds are often overlooked, it should be noted that in 2003, two deaths in Southern California were directly related to the fierce condition. A falling tree struck one woman in San Diego.<sup>7</sup> The second death occurred when a passenger in a vehicle was hit by a flying pickup truck cover launched by the Santa Ana Winds.<sup>8</sup>

**Table 6-2: Santa Ana Wind Events during 2003**

The following Santa Ana wind events were featured in news resources during 2003:	
January 6, 2003 OC Register	“One of the strongest Santa Ana windstorms in a decade toppled 26 power poles in Orange early today, blew over a mobile derrick in Placentia, crushing two vehicles, and delayed Metrolink rail service.” This windstorm also knocked out power to thousands of people in northeastern Orange County.
January 8, 2003 CBSNEWS.com	“Santa Ana’s roared into Southern California late Sunday, blowing over trees, trucks and power poles. Thousands of people lost power.”
March 16, 2003 dailybulletin.co m	Fire Officials Brace for Santa Ana Winds - - “The forest is now so dry and so many trees have died that fires, during relatively calm conditions, are running as fast and as far as they might during Santa Ana Winds. Now the Santa Ana season is here. Combine the literally tinder dry conditions with humidity in the single digits and 60-80 mph winds, and fire officials shudder.”

**Table 6-3: Major Windstorms in the Vicinity of the City of Huntington Park**

Date	Location and Damage
November 5-6, 1961	Santa Ana winds. Fire in Topanga Canyon

February 10-11, 1973	Strong storm winds: 57 mph at Riverside, 46 Newport Beach. Some 200 trees uprooted in Pacific Beach alone
October 26-27, 1993	Santa Ana winds. Fire in Laguna Hills
October 14, 1997	Santa Ana winds: gusts 87 mph in central Orange County. Large fire in Orange County
December 29, 1997	Gusts 60+ mph at Santa Ana
March 28-29, 1998	Strong storm winds in Orange County: sustained 30-40 mph. Gust 70 mph at Newport Beach, gust 60 Huntington Beach. Trees down, power out, and damage across Orange and San Diego Counties. 1 illegal immigrant dead in Jamul.
September 2, 1998	Strong winds from thunderstorms in Orange County with gusts to 40mph. Large fires in Orange County
December 6, 1998	Thunderstorm in Los Alamitos and Garden Grove: gust 50-60 mph called "almost a tornado"
December 21-22, 1999	Santa Ana winds: gust 68 mph at Campo, 53 Huntington Beach, 44 Orange. House and tree damage in Hemet.
March 5-6, 2000	Strong thunderstorm winds at the coast: gust 60 mph at Huntington Beach Property damage and trees downed along the coast
April 1, 2000	Santa Ana winds: gust 93 mph at Mission Viejo, 67 Anaheim Hills
December 25-26, 2000	Santa Ana winds: gust 87 mph at Fremont Canyon. Damage and injuries in Mira Loma, Orange and Riverside Counties
February 13, 2001	Thunderstorm gust to 89 mph in east Orange
Source: <a href="http://www.wrh.noaa.gov/sandiego/research/Guide/weatherhistory.pdf">http://www.wrh.noaa.gov/sandiego/research/Guide/weatherhistory.pdf</a>	

The following is a glimpse of major tornado-like events to hit the City of Huntington Park, and surrounding areas:

**Table 6-4: Major Tornado-like Events in the Vicinity of the City of Huntington Park**

<b>Date</b>	<b>Location and Damage</b>
April 1, 1958	Tornado: Laguna Beach
February 19, 1962	Tornado: Irvine
April 8, 1965	Tornado: Costa Mesa
November 7, 1966	Newport Beach and Costa Mesa: Property Damage

March 16, 1977	Tornado skipped from Fullerton to Brea. Damage to 80 homes and injured four people
February 9, 1978	Tornado: Irvine. Property damage and 6 injured
January 31, 1979	Tornado Santa Ana. Numerous power outages
November 9, 1982	Tornadoes in Garden Grove and Mission Viejo. Property damage
January 13, 1984	Tornado: Huntington Beach. Property damage
March 16, 1986	Tornado: Anaheim. Property damage
February 22-24, 1987	Tornadoes and waterspouts: Huntington Beach
January 18, 1988	Tornadoes: Mission Viejo and San Clemente. Property damage
February 28, 1991	Tornado: Tustin
March 27, 1991	Tornado: Huntington Beach
December 7, 1992	Tornadoes: Anaheim and Westminster. Property damage
January 18, 1993	Tornado: Orange County. Property damage
February 8, 1993	Tornado: Brea. Property damage
February 7, 1994	Tornado from Newport Beach to Tustin. Roof and window damage. Trees were also knocked down
December 13, 1994	Two waterspouts about 0.5 mile off Newport Beach
December 13, 1995	Funnel cloud near Fullerton Airport
March 13, 1996	Funnel cloud in Irvine
November 10-11, 1997	Waterspout came ashore at Newport Pier on the 10 <sup>th</sup> and dissipated over western Costa Mesa. Tornadoes in Irvine on the 11 <sup>th</sup> and a funnel cloud developed. 10 <sup>th</sup> : Winds estimated at 60-70 mph. 11 <sup>th</sup> : Minor power outages occurred with little property damage. A fisherman was blown from one end of Newport Pier to the other. Property and vehicle damage in Irvine from flying debris. Ten cars were thrown a few feet.
December 21, 1997	Waterspout and tornado in Huntington Beach. Damage to boats, houses, and city property
February 24, 1998	Tornado in Huntington Beach. Property damage with a power outage, roof flew ¼ mile
March 13-14, 1998	Numerous waterspouts between Long Beach, Huntington Beach, and Catalina
March 31-April 1, 1998	Numerous funnel clouds reported off Orange County coastline, two of which became waterspouts off Orange County. One waterspout briefly hit the coast off the Huntington Beach pier.
June 6, 1998	Two funnel clouds off Dana Point
December 31, 1998	Funnel clouds in Santa Ana. Waterspout off Costa Mesa coast
February 21, 2000	Tornado: Anaheim Hills. Property damage
October 28, 2000	Funnel clouds around Newport Beach and Costa Mesa

January 10, 2001	Funnel cloud at Orange County airport and Newport Beach
February 24, 2001	Tornado in Orange. Damage to warehouse, 6 structures, fences, and telephone wires.
Source: <a href="http://www.wrh.noaa.gov/sandiego/research/Guide/weatherhistory.pdf">http://www.wrh.noaa.gov/sandiego/research/Guide/weatherhistory.pdf</a>	

## **Windstorm Hazard Assessment**

### **Hazard Identification**

A windstorm event in the region can range from short term microburst activity lasting only minutes to a long duration Santa Ana wind condition that can last for several days as in the case of the January 2003 Santa Ana wind event. Windstorms in the City of Huntington Park area can cause extensive damage including standing heavy trees, highway infrastructure, and critical utility facilities. Figure 6-1 shows clearly the direction of the Santa Ana winds as they travel from the stable, high-pressure weather system called the Great Basin High through the canyons and towards the low-pressure system off the Pacific. Clearly the area of the City of Huntington Park is in the direct path of the ocean-bound Santa Ana winds.

### **Vulnerability and Risk**

With an analysis of the high wind and tornado events depicted in the “Local History” section, we can deduce the common windstorm impact areas including impacts on life, property, utilities, infrastructure and transportation. Additionally, if a windstorm disrupts power to local residential communities, the American Red Cross and City resources might be called upon for care and shelter duties. Displacing residents and utilizing City resources for shelter staffing and disaster cleanup can cause an economic hardship on the community.

## **Community Windstorm Issues**

### **What is Susceptible to Windstorms?**

#### **Life and Property**

Based on the history of the region, windstorm events can be expected, perhaps annually, across widespread areas of the region which can be adversely impacted during a windstorm event. This can result in the involvement of City of Huntington Park emergency response personnel during a wide-ranging windstorm or microburst tornadic activity. Both residential and commercial structures with weak reinforcement are susceptible to damage. Wind pressure can create a direct and frontal assault on a structure, pushing walls, doors, and windows inward. Conversely, passing currents can create lift suction forces that pull building components and surfaces outward. With extreme wind forces, the roof or entire building can fail causing considerable damage.

Debris carried along by extreme winds can directly contribute to loss of life and indirectly to the failure of protective building envelopes, siding, or walls. When severe windstorms strike a community, downed trees, power lines, and damaged property can be

major hindrances to emergency response and disaster recovery.

The Beaufort Scale below, coined and developed by Sir Francis Beaufort in 1805, illustrates the effect that varying wind speed can have on sea swells and structures:

**Table 6-5: Beaufort Scale**

<b>BEAUFORT SCALE</b>		
Beaufort Force	Speed (mph)	Wind Description - State of Sea - Effects on Land
0	Less 1	Calm - Mirror-like - Smoke rises vertically
1	1-3	Light - Air Ripples look like scales; No crests of foam - Smoke drift shows direction of wind, but wind vanes do not
2	4-7	Light Breeze - Small but pronounced wavelets; Crests do not break - Wind vanes move; Leaves rustle; You can feel wind on the face
3	8-12	Gentle Breeze - Large Wavelets; Crests break; Glassy foam; A few whitecaps - Leaves and small twigs move constantly; Small, light flags are extended
4	13-18	Moderate Breeze - Longer waves; Whitecaps - Wind lifts dust and loose paper; Small branches move
5	19-24	Fresh Breeze - Moderate, long waves; Many whitecaps; Some spray - Small trees with leaves begin to move
6	25-31	Strong Breeze - Some large waves; Crests of white foam; Spray - Large branches move; Telegraph wires whistle; Hard to hold umbrellas
7	32-38	Near Gale - White foam from breaking waves blows in streaks with the wind - Whole trees move; Resistance felt walking into wind
8	39-46	Gale - Waves high and moderately long; Crests break into spin drift, blowing foam in well marked streaks - Twigs and small branches break off trees; Difficult to walk
9	47-54	Strong Gale - High waves with wave crests that tumble; Dense streaks of foam in wind; Poor visibility from spray - Slight structural damage
10	55-63	Storm - Very high waves with long, curling crests; Sea surface appears white from blowing foam; Heavy tumbling of sea; Poor visibility - Trees broken or uprooted; Considerable structural damage
11	64-73	Violent Storm - Waves high enough to hide small and medium sized ships; Sea covered with patches of white foam; Edges of wave crests blown into froth; Poor visibility - Seldom experienced inland; Considerable structural damage

12	>74	Hurricane - Sea white with spray. Foam and spray render visibility almost non-existent - Widespread damage. Very rarely experienced on land.
Source: <a href="http://www.compuweather.com/decoder-charts.html">http://www.compuweather.com/decoder-charts.html</a>		

### **Disruption of Critical Services**

Critical facilities include police stations, fire stations, hospitals, shelters, and other facilities that provide important services to the community. These facilities and their services need to be functional after a windstorm event.

### **Utilities**

Historically, falling trees have been the major cause of power outages in the region. Windstorms such as strong microbursts and Santa Ana Wind conditions can cause flying debris and downed utility lines. For example, tree limbs breaking in winds of only 45 mph can be thrown over 75 feet. As such, overhead power lines can be damaged even in relatively minor windstorm events. Falling trees can bring electric power lines down to the pavement, creating the possibility of lethal electric shock. Rising population growth and new infrastructure in the region creates a higher probability for damage to occur from windstorms as more life and property are exposed to risk.

### **Infrastructure**

Windstorms can damage buildings, power lines, and other property and infrastructure due to falling trees and branches. During wet winters, saturated soils cause trees to become less stable and more vulnerable to uprooting from high winds.

Windstorms can result in collapsed or damaged buildings or blocked roads and bridges, damaged traffic signals, streetlights, and parks, among others. Roads blocked by fallen trees during a windstorm may have severe consequences to people who need access to emergency services. Emergency response operations can be complicated when roads are blocked or when power supplies are interrupted. Industry and commerce can suffer losses from interruptions in electric services and from extended road closures. They can also sustain direct losses to buildings, personnel, and other vital equipment. There are direct consequences to the local economy resulting from windstorms related to both physical damages and interrupted services.

### **Increased Fire Threat**

Perhaps the greatest danger from windstorm activity in Southern California comes from the combination of the Santa Ana winds with the major fires that occur every few years in the urban/wildland interface. With the Santa Ana winds driving the flames, the speed and reach of the flames is even greater than in times of calm wind conditions. The higher fire hazard raised by a Santa Ana wind condition requires that even more care and attention be paid to proper brush clearances on property in the wildland/urban interface areas.

### **Transportation**

Windstorm activity can have an impact on local transportation in addition to the problems caused by downed trees and electrical wires blocking streets and highways. During

periods of extremely strong Santa Ana winds, major highways can be temporarily closed to truck and recreational vehicle traffic. However, typically these disruptions are not long lasting, nor do they carry a severe long term economic impact on the region.

End Notes:

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1<http://nimbo.wrh.noaa.gov/Sandiego/snawind.html>

2Ibid

3Keith C. Heidorn at <http://www.suite101.com/article.cfm/13646/100918>, June 1, 2003

4Ibid

5Ibid

6Ibid

7www.cbsnews.com, January 8, 2003

8[www.cbsnews.com/stories/2003/01/06/national/](http://www.cbsnews.com/stories/2003/01/06/national/)

Special Thanks to Jacob Green, Assistant to the Emergency Services Coordinator, City of Fountain Valley/Huntington Beach Hazard Mitigation Planning Committee

## Appendix A: Plan Resource Directory

The Resource Directory provides contact information for local, regional, state, and federal programs that are currently involved in hazard mitigation activities. The Natural Hazards Mitigation Committee may look to the organizations on the following pages for resources and technical assistance. The Resource Directory provides a foundation for potential partners in action item implementation.

The Committee will continue to add contact information for organizations currently engaged in hazard mitigation activities. This section may also be used by various community members interested in hazard mitigation information and projects.

<b>American Public Works Association</b>			
Level: National	Hazard: Multi	<a href="http://www.apwa.net">http://www.apwa.net</a>	
2345 Grand Boulevard		Suite 500	
Kansas City, MO 64108-2641		Ph: 816-472-6100	Fx: 816-472-1610
Notes: The American Public Works Association is an international educational and professional association of public agencies, private sector companies, and individuals dedicated to providing high quality public works goods and services.			
<b>Association of State Floodplain Managers</b>			
Level: Federal	Hazard: Flood	<a href="http://www.floods.org">www.floods.org</a>	
2809 Fish Hatchery Road			
Madison, WI 53713		Ph: 608-274-0123	Fx:
Notes: The Association of State Floodplain Managers is an organization of professionals involved in floodplain management, flood hazard mitigation, the National Flood Insurance Program, and flood preparedness, warning and recovery			
<b>Building Seismic Safety Council (BSSC)</b>			
Level: National	Hazard: Earthquake	<a href="http://www.bssconline.org">www.bssconline.org</a>	
1090 Vermont Ave., NW		Suite 700	
Washington, DC 20005		Ph: 202-289-7800	Fx: 202-289-109
Notes: The Building Seismic Safety Council (BSSC) develops and promotes building earthquake risk mitigation regulatory provisions for the nation.			

<b>California Department of Transportation (Caltrans)</b>			
Level: State	Hazard: Multi	<a href="http://www.dot.ca.gov/">http://www.dot.ca.gov/</a>	
120 S. Spring Street			
Los Angeles, CA 90012	Ph: 213-897-3656	Fx:	
Notes: Caltrans is responsible for the design, construction, maintenance, and operation of the California State Highway System, as well as that portion of the Interstate Highway System within the state's boundaries. Alone and in partnership with Amtrak, Caltrans is also involved in the support of intercity passenger rail service in California.			
<b>California Resources Agency</b>			
Level: State	Hazard: Multi	<a href="http://resources.ca.gov/">http://resources.ca.gov/</a>	
1416 Ninth Street		Suite 1311	
Sacramento, CA 95814	Ph: 916-653-5656	Fx:	
Notes: The California Resources Agency restores, protects and manages the state's natural, historical and cultural resources for current and future generations using solutions based on science, collaboration and respect for all the communities and interests involved.			
<b>California Division of Forestry (CDF)</b>			
Level: State	Hazard: Multi	<a href="http://www.fire.ca.gov/php/index.php">http://www.fire.ca.gov/php/index.php</a>	
210 W. San Jacinto			
Perris CA 92570	Ph: 909-940-6900	Fx:	
Notes: The California Department of Forestry and Fire Protection protects over 31 million acres of California's privately-owned wildlands. CDF emphasizes the management and protection of California's natural resources.			
<b>California Division of Mines and Geology (DMG)</b>			
Level: State	Hazard: Multi	<a href="http://www.consrv.ca.gov/cgs/index.htm">www.consrv.ca.gov/cgs/index.htm</a>	
801 K Street		MS 12-30	
Sacramento, CA 95814	Ph: 916-445-1825	Fx: 916-445-5718	
Notes: The California Geological Survey develops and disseminates technical information and advice on California's geology, geologic hazards, and mineral resources.			
<b>California Environmental Resources Evaluation System (CERES)</b>			
Level: State	Hazard: Multi	<a href="http://ceres.ca.gov/">http://ceres.ca.gov/</a>	
900 N St.		Suite 250	
Sacramento, Ca. 95814	Ph: 916-653-2238	Fx:	
Notes: CERES is an excellent website for access to environmental information and websites.			

<b>California Department of Water Resources (DWR)</b>			
Level: State	Hazard: Flood	<a href="http://www.dwr.water.ca.gov">http://www.dwr.water.ca.gov</a>	
1416 9th Street			
Sacramento, CA 95814		Ph: 916-653-6192	Fx:
Notes: The Department of Water Resources manages the water resources of California in cooperation with other agencies, to benefit the State's people, and to protect, restore, and enhance the natural and human environments.			
<b>California Department of Conservation: Southern California Regional Office</b>			
Level: State	Hazard: Multi	<a href="http://www.consrv.ca.gov">www.consrv.ca.gov</a>	
655 S. Hope Street		#700	
Los Angeles, CA 90017-2321		Ph: 213-239-0878	Fx: 213-239-0984
Notes: The Department of Conservation provides services and information that promote environmental health, economic vitality, informed land-use decisions and sound management of our state's natural resources.			
<b>California Planning Information Network</b>			
Level: State	Hazard: Multi	<a href="http://www.calpin.ca.gov">www.calpin.ca.gov</a>	
		Ph:	Fx:
Notes: The Governor's Office of Planning and Research (OPR) publishes basic information on local planning agencies, known as the California Planners' Book of Lists. This local planning information is available on-line with new search capabilities and up-to-the-minute updates.			
<b>EPA, Region 9</b>			
Level: Regional	Hazard: Multi	<a href="http://www.epa.gov/region09">http://www.epa.gov/region09</a>	
75 Hawthorne Street			
San Francisco, CA 94105		Ph: 415-947-8000	Fx: 415-947-3553
Notes: The mission of the U.S. Environmental Protection Agency is to protect human health and to safeguard the natural environment through the themes of air and global climate change, water, land, communities and ecosystems, and compliance and environmental stewardship.			

<b>Federal Emergency Management Agency, Region IX</b>		
Level: Federal	Hazard: Multi	<a href="http://www.fema.gov">www.fema.gov</a>
1111 Broadway	Suite 1200	
Oakland, CA 94607	Ph: 510-627-7100	Fx: 510-627-7112
Notes: The Federal Emergency Management Agency is tasked with responding to, planning for, recovering from and mitigating against disasters.		
<b>Federal Emergency Management Agency, Mitigation Division</b>		
Level: Federal	Hazard: Multi	<a href="http://www.fema.gov/fima/planhowto.shtm">www.fema.gov/fima/planhowto.shtm</a>
500 C Street, S.W.		
Washington, D.C. 20472	Ph: 202-566-1600	Fx:
Notes: The Mitigation Division manages the National Flood Insurance Program and oversees FEMA's mitigation programs. It has of a number of programs and activities of which provide citizens Protection, with flood insurance; Prevention, with mitigation measures and Partnerships, with communities throughout the country.		
<b>Floodplain Management Association</b>		
Level: Federal	Hazard: Flood	<a href="http://www.floodplain.org">www.floodplain.org</a>
P.O. Box 50891		
Sparks, NV 89435-0891	Ph: 775-626-6389	Fx: 775-626-6389
Notes: The Floodplain Management Association is a nonprofit educational association. It was established in 1990 to promote the reduction of flood losses and to encourage the protection and enhancement of natural floodplain values. Members include representatives of federal, state and local government agencies as well as private firms.		
<b>Gateway Cities Partnership</b>		
Level: Regional	Hazard: Multi	<a href="http://www.gatewaycities.org">www.gatewaycities.org</a>
7300 Alondra Boulevard	Suite 202	
Paramount, CA 90723	Ph: 562-817-0820	Fx:
Notes: Gateway Cities Partnership is a 501 C 3 non-profit Community Development Corporation for the Gateway Cities region of southeast LA County. The region comprises 27 cities that roughly speaking extends from Montebello on the north to Long Beach on the South, the Alameda Corridor on the west to the Orange County line on the east.		

<b>Governor's Office of Emergency Services (OES)</b>			
Level: State	Hazard: Multi	<a href="http://www.oes.ca.gov">www.oes.ca.gov</a>	
P.O. Box 419047			
Rancho Cordova, CA 95741-9047		Ph: 916 845- 8911	Fx: 916 845- 8910
Notes: The Governor's Office of Emergency Services coordinates overall state agency response to major disasters in support of local government. The office is responsible for assuring the state's readiness to respond to and recover from natural, manmade, and war-caused emergencies, and for assisting local governments in their emergency preparedness, response and recovery efforts.			
<b>Greater Antelope Valley Economic Alliance</b>			
Level: Regional	Hazard: Multi		
42060 N. Tenth Street West			
Lancaster, CA 93534		Ph: 661-945-2741	Fx: 661-945-7711
Notes: The Greater Antelope Valley Economic Alliance, (GA VEA) is a 501 (c)(6) nonprofit organization with a 501(c)(3) affiliated organization the Antelope Valley Economic Research and Education Foundation. GA VEA is a public-private partnership of business, local governments, education, non-profit organizations and health care organizations that was founded in 1999 with the goal of attracting good paying jobs to the Antelope Valley in order to build a sustainable economy.			
<b>Landslide Hazards Program, USGS</b>			
Level: Federal	Hazard: Landslide	<a href="http://landslides.usgs.gov/index.html">http://landslides.usgs.gov/index.html</a>	
12201 Sunrise Valley Drive		MS 906	
Reston, VA 20192		Ph: 703-648- 4000	Fx:
Notes: The NLIC website provides good information on the programs and resources regarding landslides. The page includes information on the National Landslide Hazards Program Information Center, a bibliography, publications, and current projects. USGS scientists are working to reduce long-term losses and casualties from landslide hazards through better understanding of the causes and mechanisms of ground failure both nationally and worldwide.			

<b>Los Angeles County Economic Development Corporation</b>			
Level: Regional	Hazard: Multi	<a href="http://www.laedc.org">www.laedc.org</a>	
444 S. Flower Street		34th Floor	
Los Angeles, CA 90071		Ph: 213-236-4813	Fx: 213- 623-0281
Notes: The LAEDC is a private, non-profit 501 (c) 3 organization established in 1981 with the mission to attract, retain and grow businesses and jobs in the Los Angeles region. The LAEDC is widely relied upon for its Southern California Economic Forecasts and Industry Trend Reports. Lead by the renowned Jack Kyser (Sr. Vice President, Chief Economist) his team of researchers produces numerous publications to help business, media and government navigate the LA region's diverse economy.			
<b>Los Angeles County Public Works Department</b>			
Level: County	Hazard: Multi	<a href="http://ladpw.org">http://ladpw.org</a>	
900 S. Fremont Ave.			
Alhambra, CA 91803		Ph: 626-458-5100	Fx:
Notes: The Los Angeles County Department of Public Works protects property and promotes public safety through Flood Control, Water Conservation, Road Maintenance, Bridges, Buses and Bicycle Trails, Building and Safety, Land Development, Waterworks, Sewers, Engineering, Capital Projects and Airports			
<b>National Wildland/Urban Interface Fire Program</b>			
Level: Federal	Hazard: Wildfire	<a href="http://www.firewise.org/">www.firewise.org/</a>	
1 Batterymarch Park			
Quincy, MA 02169-7471		Ph: 617-770-3000	Fx: 617 770-0700
Notes: FIREWISE maintains a Website designed for people who live in wildfire- prone areas, but it also can be of use to local planners and decision makers. The site offers online wildfire protection information and checklists, as well as listings of other publications, videos, and conferences.			
<b>National Resources Conservation Service</b>			
Level: Federal	Hazard: Multi	<a href="http://www.nrcs.usda.gov/">http://www.nrcs.usda.gov/</a>	
14th and Independence Ave., SW		Room 5105-A	
Washington, DC 20250		Ph: 202-720-7246	Fx: 202-720-7690
Notes: NRCS assists owners of America's private land with conserving their soil, water, and other natural resources, by delivering technical assistance based on sound science and suited to a customer's specific needs. Cost shares and financial incentives are available in some cases.			

<b>National Interagency Fire Center (NIFC)</b>			
Level: Federal	Hazard: Wildfire	<a href="http://www.nifc.gov">www.nifc.gov</a>	
3833 S. Development Ave.			
Boise, Idaho 83705-5354		Ph: 208-387- 5512	Fx:
Notes: The NIFC in Boise, Idaho is the nation's support center for wildland firefighting. Seven federal agencies work together to coordinate and support wildland fire and disaster operations.			
<b>National Fire Protection Association (NFPA)</b>			
Level: National	Hazard: Wildfire	<a href="http://www.nfpa.org/catalog/home/index.asp">http://www.nfpa.org/catalog/home/index.asp</a>	
1 Batterymarch Park			
Quincy, MA 02169-7471		Ph: 617-770-3000	Fx: 617 770-0700
Notes: The mission of the international nonprofit NFPA is to reduce the worldwide burden of fire and other hazards on the quality of life by providing and advocating scientifically-based consensus codes and standards, research, training and education			
<b>National Floodplain Insurance Program (NFIP)</b>			
Level: Federal	Hazard: Flood	<a href="http://www.fema.gov/nfip/">www.fema.gov/nfip/</a>	
500 C Street, S.W.			
Washington, D.C. 20472		Ph: 202-566-1600	Fx:
Notes: The Mitigation Division manages the National Flood Insurance Program and oversees FEMA's mitigation programs. It has of a number of programs and activities providing citizens Protection, with flood insurance; Prevention, with mitigation measures and Partnerships, with communities throughout the country.			
<b>National Oceanic /Atmospheric Administration</b>			
Level: Federal	Hazard: Multi	<a href="http://www.noaa.gov">www.noaa.gov</a>	
14th Street & Constitution Ave NW		Rm 6013	
Washington, DC 20230		Ph: 202-482-6090	Fx: 202-482-3154
Notes: NOAA's historical role has been to predict environmental changes, protect life and property, provide decision makers with reliable scientific information, and foster global environmental stewardship.			

<b>National Weather Service, Office of Hydrologic Development</b>		
Level: Federal	Hazard: Flood	<a href="http://www.nws.noaa.gov/">http://www.nws.noaa.gov/</a>
1325 East West Highway	SSMC2	
Silver Spring, MD 20910	Ph: 301-713-1658	Fx: 301-713-0963
Notes: The Office of Hydrologic Development (OHD) enhances National Weather Service (NWS) products by: infusing new hydrologic science, developing hydrologic techniques for operational use, managing hydrologic development by NWS field office, providing advanced hydrologic products to meet needs identified by NWS customers		
<b>National Weather Service</b>		
Level: Federal	Hazard: Multi	<a href="http://www.nws.noaa.gov/">http://www.nws.noaa.gov/</a>
520 North Elevar Street		
Oxnard, CA 93030	Ph: 805-988- 6615	Fx:
Notes: The National Weather Service is responsible for providing weather service to the nation. It is charged with the responsibility of observing and reporting the weather and with issuing forecasts and warnings of weather and floods in the interest of national safety and economy. Briefly, the priorities for service to the nation are: 1. protection of life, 2. protection of property, and 3. promotion of the nation's welfare and economy.		
<b>San Gabriel Valley Economic Partnership</b>		
Level: Regional	Hazard: Multi	<a href="http://www.valleynet.org">www.valleynet.org</a>
4900 Rivergrade Road	Suite A310	
Irwindale, CA 91706	Ph: 626-856-3400	Fx: 626-856-5115
Notes: The San Gabriel Valley Economic Partnership is a non-profit corporation representing both public and private sectors. The Partnership is the exclusive source for San Gabriel Valley-specific information, expertise, consulting, products, services, and events. It is the single organization in the Valley with the mission to sustain and build the regional economy for the mutual benefit of all thirty cities, chambers of commerce, academic institutions, businesses and residents.		
<b>Sanitation Districts of Los Angeles County</b>		
Level: County	Hazard: Flood	<a href="http://www.lacsd.org/">http://www.lacsd.org/</a>
1955 Workman Mill Road		
Whittier, CA 90607	Ph:562-699-7411 x2301	Fx:
Notes: The Sanitation Districts provide wastewater and solid waste management for over half the population of Los Angeles County and turn waste products into resources such as reclaimed water, energy, and recyclable materials.		

<b>Santa Monica Mountains Conservancy</b>			
Level: Regional	Hazard: Multi	<a href="http://smmc.ca.gov/">http://smmc.ca.gov/</a>	
570 West Avenue Twenty-Six		Suite 100	
Los Angeles, CA 90065		Ph: 323-221-8900	Fx:
Notes: The Santa Monica Mountains Conservancy helps to preserve over 55,000 acres of parkland in both wilderness and urban settings, and has improved more than 114 public recreational facilities throughout Southern California.			
<b>South Bay Economic Development Partnership</b>			
Level: Regional	Hazard: Multi	<a href="http://www.southbaypartnership.com">www.southbaypartnership.com</a>	
3858 Carson Street		Suite 110	
Torrance, CA 90503		Ph: 310-792-0323	Fx: 310-543-9886
Notes: The South Bay Economic Development Partnership is a collaboration of business, labor, education and government. Its primary goal is to plan and implement an economic development and marketing strategy designed to retain and create jobs and stimulate economic growth in the South Bay of Los Angeles County.			
<b>South Coast Air Quality Management District (AQMD)</b>			
Level: Regional	Hazard: Multi	<a href="http://www.aqmd.gov">www.aqmd.gov</a>	
21865 E. Copley Drive			
Diamond Bar, CA 91765		Ph: 800-CUT-SMOG	Fx:
Notes: AQMD is a regional government agency that seeks to achieve and maintain healthful air quality through a comprehensive program of research, regulations, enforcement, and communication. The AQMD covers Los Angeles and Orange Counties and parts of Riverside and San Bernardino Counties.			
<b>Southern California Earthquake Center (SCEC)</b>			
Level: Regional	Hazard: Earthquake	<a href="http://www.scec.org">www.scec.org</a>	
3651 Trousdale Parkway		Suite 169	
Los Angeles, CA 90089-0742		Ph: 213-740-5843	Fx: 213/740-0011
Notes: The Southern California Earthquake Center (SCEC) gathers new information about earthquakes in Southern California, integrates this information into a comprehensive and predictive understanding of earthquake phenomena, and communicates this understanding to end-users and the general public in order to increase earthquake awareness, reduce economic losses, and save lives.			

<b>Southern California Association of Governments (SCAG)</b>			
Level: Regional	Hazard: Multi	<a href="http://www.scag.ca.gov">www.scag.ca.gov</a>	
818 W. Seventh Street		12th Floor	
Los Angeles, CA 90017		Ph: 213-236-1800	Fx: 213-236-1825
Notes: The Southern California Association of Governments functions as the Metropolitan Planning Organization for six counties: Los Angeles, Orange, San Bernardino, Riverside, Ventura and Imperial. As the designated Metropolitan Planning Organization, the Association of Governments is mandated by the federal government to research and draw up plans for transportation, growth management, hazardous waste management, and air quality.			
<b>State Fire Marshal (SFM)</b>			
Level: State	Hazard: Wildfire	<a href="http://osfm.fire.ca.gov">http://osfm.fire.ca.gov</a>	
1131 "S" Street			
Sacramento, CA 95814		Ph: 916-445-8200	Fx: 916-445-8509
Notes: The Office of the State Fire Marshal (SFM) supports the mission of the California Department of Forestry and Fire Protection (CDF) by focusing on fire prevention. SFM regulates buildings in which people live, controls substances which may, cause injuries, death and destruction by fire; provides statewide direction for fire prevention within wildland areas; regulates hazardous liquid pipelines; reviews regulations and building standards; and trains and educates in fire protection methods and responsibilities.			
<b>The Community Rating System (CRS)</b>			
Level: Federal	Hazard: Flood	<a href="http://www.fema.gov/nfip/crs.shtm">http://www.fema.gov/nfip/crs.shtm</a>	
500 C Street, S.W.			
Washington, D.C. 20472		Ph: 202-566-1600	Fx:
Notes: The Community Rating System (CRS) recognizes community floodplain management efforts that go beyond the minimum requirements of the NFIP. Property owners within the County would receive reduced NFIP flood insurance premiums if the County implements floodplain management practices that qualify it for a CRS rating. For further information on the CRS, visit FEMA's website.			
<b>United States Geological Survey</b>			
Level: Federal	Hazard: Multi	<a href="http://www.usgs.gov/">http://www.usgs.gov/</a>	
345 Middlefield Road			
Menlo Park, CA 94025		Ph: 650-853-8300	Fx:
Notes: The USGS provides reliable scientific information to describe and understand the Earth; minimize loss of life and property from natural disasters; manage water, biological, energy, and mineral resources; and enhance and protect our quality of life.			

<b>U.S. Army Corps of Engineers</b>			
Level: Federal	Hazard: Multi	<a href="http://www.usace.army.mil">http://www.usace.army.mil</a>	
P.O. Box 532711			
Los Angeles CA 90053- 2325		Ph: 213-452- 3921	Fx:
Notes: The United States Army Corps of Engineers work in engineering and environmental matters. A workforce of biologists, engineers, geologists, hydrologists, natural resource managers and other professionals provide engineering services to the nation including planning, designing, building and operating water resources and other civil works projects.			
<b>USDA Forest Service</b>			
Level: Federal	Hazard: Wildfire	<a href="http://www.fs.fed.us">http://www.fs.fed.us</a>	
1400 Independence Ave. SW			
Washington, D.C. 20250-0002		Ph: 202-205-8333	Fx:
Notes: The Forest Service is an agency of the U.S. Department of Agriculture. The Forest Service manages public lands in national forests and grasslands.			
<b>USGS Water Resources</b>			
Level: Federal	Hazard: Multi	<a href="http://www.water.usgs.gov">www.water.usgs.gov</a>	
6000 J Street		Placer Hall	
Sacramento, CA 95819-6129		Ph: 916-278-3000	Fx: 916-278-3070
Notes: The USGS Water Resources mission is to provide water information that benefits the Nation's citizens: publications, data, maps, and applications software.			
<b>Western States Seismic Policy Council (WSSPC)</b>			
Level: Regional	Hazard: Earthquake	<a href="http://www.wsspc.org/home.html">www.wsspc.org/home.html</a>	
125 California Avenue		Suite D201, #1	
Palo Alto, CA 94306		Ph: 650-330-1101	Fx: 650-326-1769
Notes: WSSPC is a regional earthquake consortium funded mainly by FEMA. Its website is a great resource, with information clearly categorized - from policy to engineering to education.			

<b>Westside Economic Collaborative C/O Pacific Western Bank</b>		
Level: Regional	Hazard: Multi	<a href="http://www.westside-ia.or">http://www.westside-ia.or</a>
120 Wilshire Boulevard		
Santa Monica, CA 90401	Ph: 310-458-1521	Fx: 310-458-6479
Notes: The Westside Economic Development Collaborative is the first Westside regional economic development corporation. The Westside EDC functions as an information gatherer and resource center, as well as a forum, through bringing business, government, and residents together to address issues affecting the region: Economic Diversity, Transportation, Housing, Workforce Training and Retraining, Lifelong Learning, Tourism, and Embracing Diversity.		

## **Appendix B: Public Participation**

Public participation is a key component to any strategic planning process. It is very important that such broad-reaching plans not be written in isolation. Agency participation offers an opportunity for impacted departments and organizations to provide expertise and insight into the planning process. Citizen participation offers citizens the chance to voice their ideas, interests, and opinions. The Federal Emergency Management Agency also requires public input during the development of mitigation plans.

The City of Huntington Park Natural Hazards Mitigation Plan integrates a cross-section of public input throughout the planning process. To accomplish this goal, the Planning Team developed a public participation process through five components: (1) developing a Planning Team comprised of knowledgeable individuals representative of several City agencies; (2) conducting a survey of “Levels of Concerns” to verify the primary concerns of citizens and business owners as relates to natural hazards; (3) soliciting the assistance of local media representatives and community newsletters to announce the progress of the planning activities and to announce the availability of the Draft Natural Hazards Mitigation Plan; (4) creating opportunities for the citizens and public agencies to review the Draft Natural Hazards Mitigation Plan; (5) conducting public meeting at the City Council where the public had an opportunity to express their views concerning the Draft Natural Hazards Mitigation Plan.

Integrating public participation during the development of the Natural Hazards Mitigation Plan has ultimately resulted in increased public awareness. Through public involvement, the Mitigation Plan reflects community issues, concerns, and new ideas and perspectives on mitigation opportunities and plan action items.

### **Hazard Mitigation Committee**

Hazard mitigation in the City of Huntington Park was overseen by the Natural Hazards Mitigation Committee, which consisted of representatives from various City departments. The Committee members have an understanding of how the community is structured and how residents, businesses, and the environment may be affected by natural hazard events. The Mitigation Committee, guided the development of the Plan, and assisted in developing plan goals and action items, identifying stakeholders and plan reviewers, and sharing local expertise to create a more comprehensive plan.

#### **Meeting #1: Disaster Mitigation Act Workshop January 28, 2004**

This workshop was held at the Huntington Library in the City of San Marino. Disaster Management Area Coordinators and the Los Angeles County Office of Emergency Management conducted the workshop and provided participants with an introduction the Disaster Mitigation Act, direction on how to initiate a plan, review of an approved plan template and a review of the plan process as well as benchmark dates for submittal. The workshop lasted approximately 5 hours.

Meeting #2: Disaster Mitigation Act – Plan Workshop February 26, 2004

This workshop was held at Carson Civic Center. Disaster Management Area Coordinators and the Los Angeles County Office of Emergency Management conducted the workshop and reviewed the Disaster Mitigation Act, provided direction on beginning the process, reviewed the penalties for not complying with the Act, reviewed the completed Clackamas County Plan and provided submittal deadlines. The workshop lasted approximately 5 hours.

Meeting #3: Disaster Mitigation Plan Consultant Presentation March 10, 2004

The meeting was held at the City of Downey Civic Center. Emergency Planning Consultant presented a review of the Disaster Mitigation Act and also provided information regarding their consultant services for preparation of the plan. The presentation and discussion lasted approximately 3.5 hours.

Meeting #4: Disaster Mitigation Plan Consultant Presentation March 17, 2004

The meeting was held at the City of South Gate Civic Center. Dimensions Unlimited, Inc. provided a review of the Disaster Mitigation Act and also provided information regarding their consultant services for preparation of the plan. The presentation and discussion lasted approximately 3 hours.

Meeting #5: Pre-Training May 6, 2004

The meeting was held at Huntington Park City Hall. Emergency Planning Consultants (EPC) delivered pre-training to the Planning Team. The pre-training consisted of the history of the Disaster Mitigation Act of 2000, the purpose and role of hazard mitigation, and the planning process. The Pre-Training lasted approximately 1.5 hours.

Meeting #6: Kick-Off Meeting May 6, 2004

EPC facilitated a workshop where participants had an opportunity to learn about various natural hazards, assess and rank the local threats, examine hazard maps, and complete the FEMA Worksheets contained in FEMA 386-2 Understanding Your Risks. Part of the discussion included a presentation by EPC of historical disaster events across the country. Those slides served as a backdrop for discussing potential mitigation activities.

There was an extensive discussion on various methods of engaging the public in the mitigation process. The Planning Team prepared a draft media release and discussed a public opinion survey provided by EPC. EPC committed to revising the media release and survey and distributing electronic copies to the Planning Team. The Kick-Off Meeting lasted approximately 3 hours.

Meeting #7: Pre-Training: Mitigation July 22, 2004

The meeting was held at Huntington Park City Hall. EPC delivered pre-training to the Planning Team. The pre-training consisted of the concepts and issues related to developing mitigation actions. The pre-training lasted approximately 1 hour.

#### Meeting #8: Mitigation Actions July 22, 2004

EPC delivered the Draft Hazard Analysis and the Planning Team discussed missing information, data, and maps. EPC distributed copies of the Mitigation Actions Planning Tools to assist the Team in developing Goals and Action Items appropriate to their natural hazards. The Planning Tools provided a system for collecting the mitigation actions presently in practice in the City, as well as identifying future mitigation actions.

A brainstorming process was then conducted to develop the goals for the Plan. The Planning Team established goals for the Mitigation Plan. Following a discussion of alternative ranking techniques, the Team agreed to cluster the rankings of the Mitigation Actions by type of actions as follows: #1 Multi-Hazard, #2 Earthquakes, and #3 Windstorms.

The next task was to examine a FEMA-approved Mitigation Plan to get an idea of how mitigation actions are written. Each of the jurisdictions was pleased to announce the broad range of mitigation actions already being practiced. The Planning Tools, developed by EPC, consisted of nearly 300 mitigation actions gathered from dozens of Mitigation Plans across the country.

The Planning Team then focused its efforts on developing mitigation actions, utilizing the sample plans and Planning Tools list. Because of the plan samples and Tools, the process of identifying appropriate mitigations actions was accomplished in a very efficient manner.

Throughout the planning process, the consultant reminded the Planning Team of the importance of considering Benefit/Cost issues including: social issues, political realities, economic benefits, and environmental concerns. During Meeting #4, the consultant introduced the Planning Team to the STAPLEE Tool (Social, Technical, Administrative, Political, Legal, Economic, and Environmental) as one of many means available to prioritize mitigation actions. Following a discussion of a range of benefit/cost issues, the Planning Team voted to cluster the action items by hazard as follows: #1 Multi-Hazard, #2 Earthquake, and #3 Windstorms. The Team was unanimous in its belief that the “Multi-Hazard” actions would yield the greatest benefit to the jurisdiction.

#### Public Hearing

The City of Huntington Park conducted one public Hearing where the Draft Natural Hazard Mitigation Plan was presented and discussed. The City Council approved the Plan on October 18, 2004 and was impressed with the range of mitigation actions already in practice throughout the City. The City Council was very supportive of the overall goal established by the Planning Team to become a Disaster Resistant Community. The results of the citizen survey were discussed and the Council commended the Planning Team for its expeditious efforts to satisfy the DMA 2000 requirements.

#### Invitation Process

A media release was submitted to the local weekly print media. Notices were also made available at public counters, distributed at public meetings, distributed to all City

Commissions and notices were posted on the City's Official Web Site. Notices were also posted within the community in publicly visible places.

#### Results

The Planning Team began the presentation by providing an overview of meeting objectives. The City Council and Public were encouraged to present their views and make suggestions on possible mitigation actions. The Planning Team Chair presented the staff report on the Plan, including an overview of the Hazard Analysis, Mitigation Goals, and Mitigation Actions. The staff presentation concluded with a summary of the input received during the public review of the document. The Team Chair then fielded questions from the City Council. The meeting lasted approximately 1 hour and will be aired on local cable access.

The City Council was unanimous in its adoption of the City of Huntington Park Natural Hazards Mitigation Plan.



## Appendix B-Attachment 1


### Survey Results

The City of Huntington Park distributed surveys at Public Counter, Public Meetings, on the City's Official Web Site and to all City Commissioners from June 2004 – September 2004. The survey asked participants to rank their concerns about the following hazards: flooding, earthquakes, windstorms drought and other hazards not listed. Fourteen (14) individuals responded to the survey, yielding the following results:

Natural Disaster	Extremely Concerned	Very Concerned	Concerned	Somewhat Concerned	Not Concerned	Total
Flooding	1	4	4	5		14
Earthquake	10	1	3			14
Windstorm	1	3	4	5	1	14
Drought	2	5	5	1	1	14
Other		2				2
Infestation		1				1
Fire						

## Appendix B-Attachment 2 Survey (Tri-fold Flyer)

<p style="text-align: center;"><b>Earthquakes</b> <b>Flooding</b> <b>Windstorms</b> <b>Drought</b> <b>Wildfires</b></p> <hr/> <p>Mitigation begins with you; help the City reduce the risks from natural disasters.</p> <div style="border: 1px solid black; padding: 10px; text-align: center; margin-top: 20px;"> <p>HAZARD MITIGATION WORKS, AND IT CAN SAVE YOU MONEY. IT HELPS PROTECT YOUR FAMILY, YOUR BUSINESS AND YOUR PROPERTY FROM THE EFFECTS OF NATURAL DISASTERS.</p> </div>	 <p>Please Mail, Fax or Return to:</p> <p>City of Huntington Park Natural Hazard Mitigation Plan Attn: Planning Division 6550 Miles Avenue Huntington Park, CA 90255 Fax: (323) 584-6244</p> <p>For Additional Information Contact the Planning Division at (323) 584-6210 or email: <a href="mailto:gbautista@Huntingtonpark.org">gbautista@Huntingtonpark.org</a></p>	<p style="text-align: center;"><b>City of Huntington Park</b></p> <hr/> <p style="text-align: center;">NATURAL HAZARDS MITIGATION PLAN</p> <p style="text-align: center; font-size: 1.2em;"><b>Survey</b></p> <div style="text-align: center; margin-top: 20px;">  </div> <p style="text-align: center;">6550 Miles Avenue Huntington Park, CA</p>
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<div style="display: flex; align-items: center;">  <div> <p><b>City of Huntington Park</b> <b>Natural Hazards Mitigation Plan</b></p> </div> </div> <p>The City of Huntington Park is in the process of preparing a Natural Hazards Mitigation Plan. Natural hazards include earthquakes, flooding, windstorms, drought and wildfires.</p> <p>Although the City has and continues to be concerned about all occurrences affecting the health and safety of its residents, this particular Plan focuses exclusively on "natural disasters".</p> <p>The Natural Hazards Mitigation Plan will assess local natural hazards and identify ways to minimize potential damage from natural hazards before a disaster strikes.</p> <p>The following survey is being conducted as a part of the City of Huntington Park's preparation of a Natural Hazards Mitigation Plan.</p> <p>Your participation in this survey will provide valuable information which will ensure, that the plan addresses the community's concerns.</p>	<p style="text-align: center;"><b>Level of Concern for Natural Hazards in Huntington Park</b> <i>(place an "X" in the box that best expresses your view)</i></p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="width: 15%;">Natural Disaster</th> <th style="width: 15%;">Extremely Concerned</th> <th style="width: 15%;">Very Concerned</th> <th style="width: 15%;">Concerned</th> <th style="width: 15%;">Somewhat Concerned</th> <th style="width: 15%;">Not Concerned</th> </tr> </thead> <tbody> <tr> <td>Flooding</td> <td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Earthquake</td> <td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Windstorm (including Hail)</td> <td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Drought</td> <td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Other</td> <td></td><td></td><td></td><td></td><td></td> </tr> </tbody> </table> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Additional Comments: _____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> </div>	Natural Disaster	Extremely Concerned	Very Concerned	Concerned	Somewhat Concerned	Not Concerned	Flooding						Earthquake						Windstorm (including Hail)						Drought						Other					
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Windstorm (including Hail)																																					
Drought																																					
Other																																					

## Appendix B-Attachment 3

### In-House Survey Distribution List

Elsa Avalos Civil Service Commission	Jaime Mendez A. Civil Service Commission	Elisa Rudolph Civil Service Commission
Betty Davis Gonzales Parks & Recreation Commission	Bertha Lopez Parks & Recreation Commission	Steve Martinez Parks & Recreation Commission
Yvonne Correa Parks & Recreation Commission	Ralph Cervantes Parks & Recreation Commission	Alfred Bravo, Sr. Planning Commission
Marial L. Sanders Planning Commission	Veronica Lopez Planning Commission	Andy Molina Planning Commission
Eddie Benitez Planning Commission	Maricela Delgadillo Youth Commission	Silvano Saldivar, Jr. Youth Commission
Rosa Meza Youth Commission	Silvia Gonzales Youth Commission	Victor Hernandez Youth Commission
Jaime Mendez Business Improvement District	Jack Zagha Business Improvement District	Frank Ruiterman Business Improvement District
Rosalinda Huerta Business Improvement District	Marinela Soto Business Improvement District	Frank Maclean Business Improvement District
Sharon Lee Business Improvement District	Gina Min Business Improvement District	Tony Atuf Business Improvement District
Ramin Saedi Business Improvement District	Victor Caballero Arts & Culture Commission	Vicente Ortiz Arts & Culture Commission
Diane Spalding Arts & Culture Commission	Elba Guerrero Arts & Culture Commission	Jackie Gutierrez Arts & Culture Commission
Patrick Fu Traffic Authority	Bill Dears Traffic Authority	Gregory D. Korduner Traffic Authority

## **Appendix B-Attachment 4 Media Release and Postings**

# **PUBLIC NOTICE**

### **THE CITY OF HUNTINGTON PARK IS PREPARING A NATURAL HAZARDS MITIGATION PLAN**

Pursuant to federal mandate, the City of Huntington Park is in the process of preparing a Natural Hazards Mitigation Plan. This plan solely focuses on mitigation efforts for “natural disasters.” The City of Huntington Park has and continues to be concerned about all occurrences affecting the health and safety of its residents. However, at this time, our focus is to comply with the federal mandate and ensure that our City minimizes potential damage from natural hazards.

The Natural Hazards Mitigation Plan assesses local natural hazards and identifies ways to minimize potential damage from natural hazards before a disaster strikes. The Plan is being prepared by the City of Huntington Park with assistance from Emergency Planning Consultants. The City has created a Planning Team consisting of personnel from the various City Departments.

The planning document will focus on the potential impacts of natural hazards including earthquakes, floods, windstorms, and drought.

A draft copy of the Natural Hazards Mitigation Plan will be available for public review and comment during the month of September 2004, in the Huntington Park City Clerk’s Office, located at 6550 Miles Avenue, during the hours of 7:00 a.m. to 5:30 p.m., Monday through Thursday.

Following the review and comment period, the City Council will conduct a Noticed Public Hearing for this item where open public testimony from all interested parties will be accepted for the public record.

Public input into this process is very important, therefore, residents and business owners are encouraged to review the document and participate in the public hearing that will be noticed and scheduled for October 2004.

Anyone having concerns, questions, or wishing to review or comment on the plan is welcome to contact the City Planning Division at (323) 582-6161 ext. 210, or visit the office located at 6550 Miles Avenue during the hours of 7:00 a.m. to 5:30 p.m., Monday through Thursday.

**HUNTINGTON PARK CITY COUNCIL**

Juan Noguez, Mayor

## **Appendix B-Attachment 5 City Council Public Hearing Notice**

### **NOTICE OF PUBLIC HEARING**

The Huntington Park City Council will be holding a public hearing on Monday, **October 18, 2004** at 6:30 p.m. in the Huntington Park Civic Center, Council Chambers, located at 6550 Miles Avenue, Huntington Park, California 90255, to consider adoption of the following:

**NATURAL HAZARDS MITIGATION PLAN (DRAFT) – The Natural Hazards Mitigation Plan (Draft) assesses local natural hazards and identifies ways to minimize potential damage from natural hazards before a disaster strikes. The plan focuses on the potential impacts of natural hazards including earthquakes and windstorms.**

The Natural Hazards Mitigation Plan (Draft) may be reviewed and comments will be received any time prior to final action. The City Council will be considering the document, staff's recommendations, and public input at their meeting of **October 18, 2004**, prior to making a final determination.

The City Council will conduct a public hearing for this item in accordance with State and local authority where open public testimony from all interested parties will be accepted for the public record. The City has established formal rules and regulations for such hearings in Title 9 of the Huntington Park Municipal Code. The City Council shall rule on this matter by majority vote after receiving all public testimony in the public meeting to consider the maintenance of the public health, safety, and welfare of the City in accordance with all applicable laws and to generally promote, provide, and regulate the future growth, development, and beautification of the City.

Anyone having concerns, questions, or wishing to review or comment on the plan is welcome to contact the City Planning Division at (323) 582-6161 ext. 210 or visit the office located at 6550 Miles Avenue, during the hours of 7:00 a.m. to 5:30 p.m., Monday through Thursday.

Also, anyone objecting to or in favor of the above may appear in person at the above-described meeting or may submit their concerns in writing to the City prior to said meeting. Written comments should be addressed to the Planning Division, City of Huntington Park, 6550 Miles Avenue, Huntington Park, CA 90255.

**IF YOU CHALLENGE ANY OF THE FOREGOING ACTIONS IN COURT, YOU MAY BE LIMITED TO RAISING ONLY THOSE ISSUES YOU OR SOMEONE ELSE RAISED AT THE PUBLIC HEARING FOR FINAL ACTION DESCRIBED IN THIS NOTICE, OR IN WRITTEN CORRESPONDENCE DELIVERED TO THE CITY COUNCIL AT, OR PRIOR TO, THE PUBLIC HEARING.**

**HUNTINGTON PARK CITY COUNCIL**  
Juan Noguez, Mayor

## Appendix B-Attachment 6

### City Council Public Hearing Postings

#### NOTICE OF PUBLIC HEARING

The Huntington Park City Council will be holding a public hearing on Monday, **October 18, 2004** at 6:30 p.m. in the Huntington Park Civic Center, Council Chambers, located at 6550 Miles Avenue, Huntington Park, California 90255, to consider adoption of the following:

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Also, anyone objecting to or in favor of the above may appear in person at the above-described meeting or may submit their concerns in writing to the City prior to said meeting. Written comments should be addressed to the Planning Division, City of Huntington Park, 6550 Miles Avenue, Huntington Park, CA 90255.

**IF YOU CHALLENGE ANY OF THE FOREGOING ACTIONS IN COURT, YOU MAY BE LIMITED TO RAISING ONLY THOSE ISSUES YOU OR SOMEONE ELSE RAISED AT THE PUBLIC HEARING FOR FINAL ACTION DESCRIBED IN THIS NOTICE, OR IN WRITTEN CORRESPONDENCE DELIVERED TO THE CITY COUNCIL AT, OR PRIOR TO, THE PUBLIC HEARING.**

**HUNTINGTON PARK CITY COUNCIL**  
Juan Noguez, Mayor



## Appendix B-Attachment 7

### City Council Resolution of Approval

#### RESOLUTION NO. 2004-65

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF HUNTINGTON PARK ADOPTING THE NATURAL HAZARDS MITIGATION PLAN (DRAFT) AND AUTHORIZING STAFF TO SUBMIT THE PLAN TO THE STATE OFFICE OF EMERGENCY SERVICES AND THE FEDERAL EMERGENCY MANAGEMENT AGENCY.

WHEREAS, the Federal Government adopted Section 322 of the Disaster Mitigation Act which instructed the Federal Emergency Management Agency to establish criteria for the preparation of a Natural Hazards Mitigation Plan (NHMP);

WHEREAS, jurisdictions are required to adopt a Natural Hazards Mitigation Plan at either the local or regional level;

WHEREAS, in April 2004, the City Council approved an agreement with Emergency Planning Consultants for preparation of the Natural Hazards Mitigation Plan;

WHEREAS, a Natural Hazards Mitigation Plan Team was established with representatives from various City Departments;

WHEREAS, notices announcing preparation of the plan and requesting public participation were posted in various areas throughout the City and published in a newspaper of local circulation;

WHEREAS, the Natural Hazards Mitigation Plan has been completed; and

WHEREAS, the Natural Hazards Mitigation Plan must be approved by the City Council prior to being submitted to the State Office of Emergency Services and the Federal Emergency Management Agency.

**NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF HUNTINGTON PARK DOES HEREBY RESOLVE AS FOLLOWS:**

SECTION 1: The City Council hereby approves and adopts the Natural Hazards Mitigation Plan, a copy of which is attached hereto as Exhibit A.

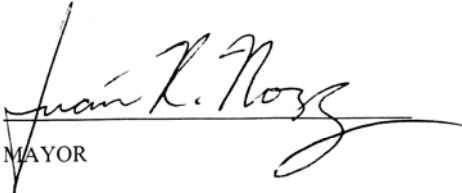
SECTION 2: The City Council hereby authorizes staff to submit the plan to the State Office of Emergency Services and the Federal Emergency Management Agency.

SECTION 3: The City Clerk shall certify to the adoption of this Resolution.

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PASSED, APPROVED AND ADOPTED this 18th day of October, 2004.

  
MAYOR

ATTEST:

  
CITY CLERK

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ATTEST:

STATE OF CALIFORNIA       )  
COUNTY OF LOS ANGELES   ) SS  
CITY OF HUNTINGTON PARK)

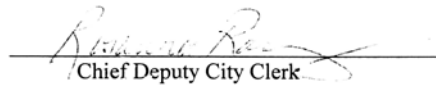
I, Rosanna M. Ramirez, Chief Deputy City Clerk of the City of Huntington Park, California, do hereby certify that the whole number of members of the City Council of said City is five; that the foregoing Resolution, being Resolution No. 2004-65, was duly passed and adopted by the City Council of the City of Huntington Park, approved and signed by the Mayor of said City, and attested to by the City Clerk of said City, all at a regular meeting of the City Council held on the 18<sup>th</sup> day of October, 2004, and that the same was so passed and adopted by the following vote, to wit:

AYES:       Council Members - Escareño, Hernandez, Gomez, Loya, Noguez

NOES:       Council Members - None

ABSENT:     Council Members - None

ABSTAIN:    Council Members - None

  
\_\_\_\_\_  
Chief Deputy City Clerk

## Appendix B-Attachment 8 Outside Agency Plan Reviewers

Los Angeles County Health Dept.  
Environmental Health  
245 S. Feterly Ave., Room 2014  
Los Angeles, CA 90022

Los Angeles Unified School District  
Real Estate and Asset Management Br.  
355 South Grand Avenue, Suite 500  
Los Angeles, CA 90071

Los Angeles County Public Works  
900 South Fremont  
Alhambra, CA 91803

Huntington Park  
Police Department  
6542 Miles Avenue  
Huntington Park, CA 90255

Los Angeles County  
Planning Department  
320 W. Temple Ave., Room 1360  
Los Angeles, CA 90012

City of Cudahy  
Planning Department  
5220 Santa Ana Street  
Cudahy, CA 90201

Metro. Trans. Authority  
CEQA Review Coordination  
Mail Stop 99-23-2  
One Gateway Plaza  
Los Angeles, CA 90012-2952

Los Angeles County Fire Dept.  
6031 Rickenbacker Road  
Commerce, CA 90040

South Coast Air Quality  
Management District  
21865 East Copley Drive  
Diamond Bar, CA 91765

Huntington Park  
Building Division  
6550 Miles Avenue  
Huntington Park, CA 90255

Los Angeles County  
Department of Public Works  
P.O. Box 1460  
Alhambra, CA 91802-1460

City of Vernon  
Planning Department  
4305 Santa Fe Avenue  
Vernon, CA 90058

City of Maywood  
Planning Department  
4319 East Slauson Avenue  
Maywood, CA 90270

City of South Gate  
Planning Department  
8650 California Avenue  
South Gate, CA 90280

Regional Water Quality Board  
320 W. 4 th Street, Ste. 200  
Los Angeles, CA 90013  
Los Angeles County  
Sanitation District  
1955 Workman Mill Road  
Whittier, CA 90601

L.A. County Clerk's Office  
12400 E. Imperial Hwy, Rm.  
2001  
Norwalk, CA 90650

City of Los Angeles  
Planning Department  
200 N. Spring St., 6~h Floor  
Los Angeles, CA 90012

City of Bell  
Planning Department  
6330 Pine Avenue  
Bell, CA 90201

Dept. of Waste Management  
8761 Younger Creek Drive  
Sacramento, CA 95828

## Appendix B-Attachment 9

### Letter of Intent

Letter of Intent Notice – Enclosure 1 for Cities/Special Districts/Other Jurisdictions

#### Letter of Intent (to develop a Local Hazard Mitigation Plan)

Name of City/Special District/Jurisdiction: City of Huntington Park  
County of Los Angeles in the State of California

- ☐ The above named **City/Special District Jurisdiction**, does not intend to develop a Local Hazard Mitigation Plan (LHMP) at this time. [The jurisdiction understands that it will not be eligible to receive mitigation project funding after November 1, 2004.]
- ☒ The above named **City/Special District Jurisdiction**, intends to develop and submit for State review and FEMA approval, a LHMP, written in accordance with Section 322 of the Stafford Act, as indicated below. **(Check One)** (Please provide the name of the jurisdiction's LHMP contact person below.)
- ☒ **Single Jurisdiction LHMP or a** ☐ **Multi-Jurisdictional LHMP. If Multi-Jurisdictional, name of LEAD Jurisdiction:** \_\_\_\_\_

#### CONCERNING THE LHMP:

- ☒ The above named City/Special District/Jurisdiction has begun development of a LHMP.
- ☐ The above named City/Special District/Jurisdiction will begin development of a LHMP by **Date:** \_\_\_\_\_.
- ☐ The above named City/Special District/Jurisdiction does not have enough information to complete this Letter of Intent. Please contact the person listed below to provide clarification or additional information to the jurisdiction.

Signed: Gregory D. Korduner Date: June 23, 2004  
(**Committee/Board Chair or Designated Representative**)

(Print name & title of signing official) Gregory D. Korduner, City Manager

Name LHMP Contact Person:	<u>Gabriel Bautista</u>
Title:	<u>Associate Planner</u>
Telephone:	( 323 ) <u>584</u> - <u>6249</u>
E-mail address:	<u>gbautista@huntingtonpark.org</u>

**Please complete the enclosed *Letter of Intent* ASAP and FAX to the OES Hazard Mitigation Section at (916) 845-8385 or 845-8386.**

# Appendix B-Attachment 10

## Status of LHMP Letter

**Status of LHMP (Local Hazard Mitigation Plan)**  
**Area E Cities**

I will be attending a meeting on the morning of July 13 (next Tuesday) at the County EOC to discuss the status of the cities' Hazard Mitigation planning efforts. I know most of you are in the process and I would like to be able to make a complete report at Tuesday's meeting. So — would you please take a few minutes and answer the questions below and return to me via e-mail ASAP. As always, thank you so much for your help.

City of:	City of Huntington Park
Contact:	Gabriel Bautista
Phone:	323-584-6249
e-mail:	gbautista@huntingtonpark.org

**Please check # 1, 2 or 3 below:**

1) ☒ Our city has begun development of the LHMP (in accordance with Section 322 of the Stafford Act)

2) ☐ Our city will begin development of the LHMP by date: \_\_\_\_\_

3) ☐ Our city does NOT intend to develop a LHMP at this time. (The jurisdiction understands that it will not be eligible to receive mitigation project funding after November 1, 2004.)

**If you are in the LHMP process —**

- Are you writing the plan in house? Yes ☐ No ☒
- If so, who is the lead? (position title) \_\_\_\_\_
- Have you hired a consultant to assist with the plan? Yes ☒ No ☐
- If so, who: Emergency Planning Consultants, Carolyn J. Harshman
- At what stage of the planning process are you? **Please summarize what has taken place to date (kick-off meeting, public hearings, questionnaires, etc.)**
  - City staff attended Disaster Mitigation Plan Workshop - January 28, 2004
  - City staff attended Disaster Mitigation Plan Workshop - February 26, 2004
  - City staff attended Emergency Planning Consultants presentation - March 16, 2004

- City staff attended Dimensions Unlimited, Inc. presentation - March 17, 2004
- Agreement with Carolyn J. Harshman, Emergency Planning Consultants for the preparation of the Natural Hazards Mitigation Plan approved by the Huntington Park City Council - April 5, 2004
- Kick-off meeting with City staff and consultant - May 6, 2004
- Notice of Plan Preparation posted throughout City and Published in local paper - July 8, 2004
- What date is your last public hearing scheduled? Not Yet Scheduled
- What date is scheduled for approval by City Council? October 4, 2004
- What date do you expect to submit plan to OES. October 7, 2004
- Is your LHMP for your jurisdiction only ☒ or a Multi-Jurisdictional LHMP? ☐
- If Multi-Jurisdictional, please list other cities or school districts with which you are partnering: \_\_\_\_\_

Please return to Fan at [areae@earthlink.net](mailto:areae@earthlink.net) or fax 562-902-2360 ASAP. I will be making a summary report on July 13.

## **Appendix C: Benefit/Cost Analysis**

Benefit/Cost Analysis is a key mechanism used by the California Office of Emergency Services (OES), the Federal Emergency Management Agency, and other state and federal agencies in evaluating hazard mitigation projects, and is required by the Robert T. Stafford Disaster Relief and Emergency Assistance Act, Public Law 93-288, as amended.

This Appendix outlines several approaches for conducting economic analysis of natural hazard mitigation projects. It describes the importance of implementing mitigation activities, different approaches to economic analysis of mitigation strategies, and methods to calculate costs and benefits associated with mitigation strategies. Information in this section is derived in part from: Federal Emergency Management Agency Publication 331, Report on Costs and Benefits of Natural Hazard Mitigation.

This section is not intended to provide a comprehensive description of benefit/cost analysis, nor is it intended to provide the details of economic analysis methods that can be used to evaluate local projects. It is intended to 1) raise benefit/cost analysis as an important issue, and 2) provide some background on how economic analysis can be used to evaluate mitigation projects.

### **Why Evaluate Mitigation Strategies?**

Mitigation activities reduce the cost of disasters by minimizing property damage, injuries, and the potential for loss of life, and by reducing emergency response costs, which would otherwise be incurred.

Evaluating natural hazard mitigation provides decision-makers with an understanding of the potential benefits and costs of an activity, as well as a basis upon which to compare alternative projects. Evaluating mitigation projects is a complex and difficult undertaking, which is influenced by many variables. First, natural disasters affect all segments of the communities they strike, including individuals, businesses, and public services such as fire, police, utilities, and schools.

Second, while some of the direct and indirect costs of disaster damages are measurable, some of the costs are non-financial and difficult to quantify in dollars. Third, many of the impacts of such events produce “ripple-effects” throughout the community, greatly increasing the disaster’s social and economic consequences.

While not easily accomplished, there is value, from a public policy perspective, in assessing the positive and negative impacts from mitigation activities, and obtaining an instructive benefit/cost comparison. Otherwise, the decision to pursue or not pursue various mitigation options would not be based on an objective understanding of the net benefit or loss associated with these actions.

### **What are Some Economic Analysis Approaches for Mitigation Strategies?**

The approaches used to identify the costs and benefits associated with natural hazard

mitigation strategies, measures, or projects fall into two general categories: benefit/cost analysis and cost-effectiveness analysis. The distinction between the two methods is the way in which the relative costs and benefits are measured. Additionally, there are varying approaches to assessing the value of mitigation for public sector and private sector activities.

### **Benefit/Cost Analysis**

Benefit/Cost Analysis is used in natural hazards mitigation to show if the benefits to life and property protected through mitigation efforts exceed the cost of the mitigation activity. Conducting benefit/cost analysis for a mitigation activity can assist communities in determining whether a project is worth undertaking now, in order to avoid disaster related damages later. Benefit/cost analysis is based on calculating the frequency and severity of a hazard, avoided future damages, and risk.

In benefit/cost analysis, all costs and benefits are evaluated in terms of dollars, and a net benefit/cost ratio is computed to determine whether a project should be implemented (i.e., if net benefits exceed net costs, the project is worth pursuing). A project must have a benefit/cost ratio greater than 1 in order to be funded.

### **Cost-Effectiveness Analysis**

Cost-effectiveness analysis evaluates how best to spend a given amount of money to achieve a specific goal. This type of analysis, however, does not necessarily measure costs and benefits in terms of dollars. Determining the economic feasibility of mitigating natural hazards can also be organized according to the perspective of those with an economic interest in the outcome. Hence, economic analysis approaches are covered for both public and private sectors as follows.

#### **Investing in public sector mitigation activities**

Evaluating mitigation strategies in the public sector is complicated because it involves estimating all of the economic benefits and costs regardless of who realizes them, and potentially to a large number of people and economic entities. Some benefits cannot be evaluated monetarily, but still affect the public in profound ways. Economists have developed methods to evaluate the economic feasibility of public decisions that involve a diverse set of beneficiaries and non-market benefits.

#### **Investing in private sector mitigation activities**

Private sector mitigation projects may occur on the basis of one of two approaches: it may be mandated by a regulation or standard, or it may be economically justified on its own merits. A building or landowner, whether a private entity or a public agency, are required to conform to a mandated standard may consider the following options:

1. Request cost sharing from public agencies;
2. Dispose of the building or land either by sale or demolition;
3. Change the designated use of the building or land and change the hazard mitigation compliance requirement; or

4. Evaluate the most feasible alternatives and initiate the most cost effective hazard mitigation alternative.

The sale of a building or land triggers another set of concerns. For example, real estate disclosure laws can be developed which require sellers of real property to

Estimating the costs and benefits of a hazard mitigation strategy can be a complex process.

Employing the services of a specialist can assist in this process.

disclose known defects and deficiencies in the property, including earthquake weaknesses and hazards to prospective purchasers. Correcting deficiencies can be expensive and time consuming, but their existence can prevent the sale of the building. Conditions of a sale regarding the deficiencies and the price of the building can be negotiated between a buyer and seller.

### **How can an Economic Analysis be conducted?**

Benefit/cost analysis and cost-effectiveness analysis are important tools in evaluating whether or not to implement a mitigation activity. A framework for evaluating alternative mitigation activities is outlined below:

**1. Identify the Alternatives:** Alternatives for reducing risk from natural hazards can include structural projects to enhance disaster resistance, education and outreach, and acquisition or demolition of exposed properties, among others. Different mitigation project can assist in minimizing risk to natural hazards, but do so at varying economic costs.

**2. Calculate the Costs and Benefits:** Choosing economic criteria is essential to systematically calculating costs and benefits of mitigation projects and selecting the most appropriate alternative. Potential economic criteria to evaluate alternatives include:

- **Determine the project cost.** This may include initial project development costs, and repair and operating costs of maintaining projects over time.

- **Estimate the benefits.** Projecting the benefits or cash flow resulting from a project can be difficult. Expected future returns from the mitigation effort depend on the correct specification of the risk and the effectiveness of the project, which may not be well known. Expected future costs depend on the physical durability and potential economic obsolescence of the investment. This is difficult to project. These considerations will also provide guidance in selecting an appropriate salvage value. Future tax structures and rates must be projected.

Financing alternatives must be researched, and they may include retained earnings, bond and stock issues, and commercial loans.

- **Consider costs and benefits to society and the environment.** These are not easily measured, but can be assessed through a variety of economic tools including existence value or contingent value theories. These theories provide quantitative data on the value people attribute to physical or social environments. Even without hard data, however, impacts of structural projects to the physical environment or to society should be considered when implementing mitigation projects.

- **Determine the correct discount rate.** Determination of the discount rate can just be the risk-free cost of capital, but it may include the decision maker's time preference and also a risk premium. Including inflation should also be considered.

**3. Analyze and Rank the Alternatives:** Once costs and benefits have been quantified, economic analysis tools can rank the alternatives. Two methods for determining the best alternative given varying costs and benefits include net present value and internal rate of return.

- **Net present value.** Net present value is the value of the expected future returns of an investment minus the value of expected future cost expressed in today's dollars. If the net present value is greater than the project costs, the project may be determined feasible for implementation. Selecting the discount rate, and identifying the present and future costs and benefits of the project calculates the net present value of projects.

- **Internal Rate of Return.** Using the internal rate of return method to evaluate mitigation projects provides the interest rate equivalent to the dollar returns expected from the project. Once the rate has been calculated, it can be compared to rates earned by investing in alternative projects. Projects may be feasible to implement when the internal rate of return is greater than the total costs of the project.

Once the mitigation projects are ranked on the basis of economic criteria, decision-makers can consider other factors, such as risk; project effectiveness; and economic, environmental, and social returns in choosing the appropriate project for implementation.

### **How are Benefits of Mitigation Calculated?**

#### **Economic Returns of Natural Hazard Mitigation**

The estimation of economic returns, which accrue to building or land owner as a result of natural hazard mitigation, is difficult. Owners evaluating the economic feasibility of

mitigation should consider reductions in physical damages and financial losses. A partial list follows:

- Building damages avoided
- Content damages avoided
- Inventory damages avoided
- Rental income losses avoided
- Relocation and disruption expenses avoided
- Proprietor's income losses avoided

These parameters can be estimated using observed prices, costs, and engineering data. The difficult part is to correctly determine the effectiveness of the hazard mitigation project and the resulting reduction in damages and losses. Equally as difficult is assessing the probability that an event will occur. The damages and losses should only include those that will be borne by the owner. The salvage value of the investment can be important in determining economic feasibility. Salvage value becomes more important as the time horizon of the owner declines. This is important because most businesses depreciate assets over a period of time.

#### **Additional Costs from Natural Hazards**

Property owners should also assess changes in a broader set of factors that can change as a result of a large natural disaster. These are usually termed “indirect” effects, but they can have a very direct effect on the economic value of the owner's building or land. They can be positive or negative, and include changes in the following:

- Commodity and resource prices
- Availability of resource supplies
- Commodity and resource demand changes
- Building and land values
- Capital availability and interest rates
- Availability of labor
- Economic structure
- Infrastructure
- Regional exports and imports
- Local, state, and national regulations and policies
- Insurance availability and rates

Changes in the resources and industries listed above are more difficult to estimate and require models that are structured to estimate total economic impacts. Total economic impacts are the sum of direct and indirect economic impacts. Total economic impact models are usually not combined with economic feasibility models. Many models exist to estimate total economic impacts of changes in an economy. Decision makers should understand the total economic impacts of natural disasters in order to calculate the benefits of a mitigation activity. This suggests that understanding the local economy is an important first step in being able to understand the potential impacts of a disaster, and the benefits of mitigation activities.

**Additional Considerations**

Conducting an economic analysis for potential mitigation activities can assist decision-makers in choosing the most appropriate strategy for their community to reduce risk and prevent loss from natural hazards. Economic analysis can also save time and resources from being spent on inappropriate or unfeasible projects. Several resources and models are listed on the following page that can assist in conducting an economic analysis for natural hazard mitigation activities.

Benefit/cost analysis is complicated, and the numbers may divert attention from other important issues. It is important to consider the qualitative factors of a project associated with mitigation that cannot be evaluated economically. There are alternative approaches to implementing mitigation projects. Many communities are looking towards developing multi-objective projects. With this in mind, opportunity rises to develop strategies that integrate natural hazard mitigation with projects related to watersheds, environmental planning, community economic development, and small business development, among others. Incorporating natural hazard mitigation with other community projects can increase the viability of project implementation.

## Resources

CUREe Kajima Project, Methodologies For Evaluating The Socio-Economic Consequences Of Large Earthquakes, Task 7.2 Economic Impact Analysis, Prepared by University of California, Berkeley Team, Robert A. Olson, VSP Associates, Team Leader; John M. Eidinger, G&E Engineering Systems; Kenneth A. Goettel, Goettel and Associates Inc.; and Gerald L. Horner, Hazard Mitigation Economics Inc., 1997.

Federal Emergency Management Agency, Benefit/Cost Analysis of Hazard Mitigation Projects, Riverine Flood, Version 1.05, Hazard Mitigation Economics Inc., 1996.

Federal Emergency Management Agency Report on Costs and Benefits of Natural Hazard Mitigation. Publication 331, 1996.

Goettel & Horner Inc., Earthquake Risk Analysis Volume III: The Economic Feasibility of Seismic Rehabilitation of Buildings in The City of Portland, Submitted to the Bureau of Buildings, City of Portland, August 30, 1995.

Goettel & Horner Inc., Benefit/Cost Analysis of Hazard Mitigation Projects Volume V, Earthquakes, Prepared for FEMA's Hazard Mitigation Branch, October 25, 1995.

Horner, Gerald, Benefit/Cost Methodologies for Use in Evaluating the Cost Effectiveness of Proposed Hazard Mitigation Measures, Robert Olson Associates, Prepared for Oregon State Police, Office of Emergency Management, July 1999.

Interagency Hazards Mitigation Team, State Hazard Mitigation Plan, (Oregon State Police – Office of Emergency Management, 2000).

Risk Management Solutions, Inc., Development of a Standardized Earthquake Loss Estimation Methodology, National Institute of Building Sciences, Volume I and II, 1994.

VSP Associates, Inc., A Benefit/Cost Model for the Seismic Rehabilitation of Buildings, Volumes 1 & 2, Federal Emergency Management Agency, FEMA, Publication Numbers 227 and 228, 1991.

VSP Associates, Inc., Benefit/Cost Analysis of Hazard Mitigation Projects: Section 404 Hazard Mitigation Program and Section 406 Public Assistance Program, Volume 3: Seismic Hazard Mitigation Projects, 1993.

VSP Associates, Inc., Seismic Rehabilitation of Federal Buildings: A Benefit/Cost Model, Volume 1, Federal Emergency Management Agency, FEMA, Publication Number 255, 1994.

## **Appendix D: Acronyms**

### **Federal Acronyms**

AASHTO	American Association of State Highway and Transportation Officials
ATC	Applied Technology Council
b/ca	benefit/cost analysis
BFE	Base Flood Elevation
BLM	Bureau of Land Management
BSSC	Building Seismic Safety Council
CDBG	Community Development Block Grant
CFR	Code of Federal Regulations
CRS	Community Rating System
DOE	Department of Energy
EDA	Economic Development Administration
EPA	Environmental Protection Agency
ER	Emergency Relief
EWP	Emergency Watershed Protection (NRCS Program)
FAS	Federal Aid System
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FMA	Flood Mitigation Assistance (FEMA Program)
FTE	Full Time Equivalent
GIS	Geographic Information System
GNS	Institute of Geological and Nuclear Sciences (International)
GSA	General Services Administration
HAZUS	Hazards U.S.
HMGP	Hazard Mitigation Grant Program
HMST	Hazard Mitigation Survey Team
HUD	Housing and Urban Development (United States, Department of)
IBHS	Institute for Business and Home Safety
ICC	Increased Cost of Compliance
IHMT	Interagency Hazard Mitigation Team
NCDC	National Climate Data Center
NFIP	National Flood Insurance Program
NFPA	National Fire Protection Association
NHMP	Natural Hazard Mitigation Plan (also known as "409 Plan")
NIBS	National Institute of Building Sciences
NIFC	National Interagency Fire Center
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NPS	National Park Service
NRCS	Natural Resources Conservation Service
NWS	National Weather Service

SBA	Small Business Administration
SHMO	State Hazard Mitigation Officer
TOR	Transfer of Development Rights
UGB	Urban Growth Boundary
URM	Unreinforced Masonry
USACE	United States Army Corps of Engineers
USBR	United States Bureau of Reclamation
USDA	United States Department of Agriculture
USFA	United States Fire Administration
USFS	United States Forest Service
USGS	United States Geological Survey
WSSPC	Western States Seismic Policy Council

### California Acronyms

A&W	Alert and Warning
AA	Administering Areas
AAR	After Action Report
ARC	American Red Cross
ARP	Accidental Risk Prevention
ATC20	Applied Technology Council20
ATC21	Applied Technology Council21
BCP	Budget Change Proposal
BSA	California Bureau of State Audits
CAER	Community Awareness & Emergency Response
CalARP	California Accidental Release Prevention
CalBO	California Building Officials
CalEPA	California Environmental Protection Agency
CalREP	California Radiological Emergency Plan
CALSTARS	California State Accounting Reporting System
CalTRANS	California Department of Transportation
CBO	Community Based Organization
CD	Civil Defense
CDF	California Department of Forestry and Fire Protection
CDMG	California Division of Mines and Geology
CEC	California Energy Commission
CEPEC	California Earthquake Prediction Evaluation Council
CESRS	California Emergency Services Radio System
CHIP	California Hazardous Identification Program
CHMIRS	California Hazardous Materials Incident Reporting System
CHP	California Highway Patrol
CLETS	California Law Enforcement Telecommunications System
CSTI	California Specialized Training Institute
CUEA	California Utilities Emergency Association
CUPA	Certified Unified Program Agency
DAD	Disaster Assistance Division (California Office of Emergency Services)

DFO	Disaster Field Office
DGS	California Department of General Services
DHSRHB	California Department of Health Services, Radiological Health Branch
DO	Duty Officer
DOC	Department Operations Center
DOF	California Department of Finance
DOJ	California Department of Justice
DPA	California Department of Personnel Administration
DPIG	Disaster Preparedness Improvement Grant
DR	Disaster Response
DSA	Division of the State Architect
DSR	Damage Survey Report
DSW	Disaster Service Worker
DWR	California Department of Water Resources
EAS	Emergency Alerting System
EDIS	Emergency Digital Information System
EERI	Earthquake Engineering Research Institute
EMA	Emergency Management Assistance
EMI	Emergency Management Institute
EMMA	Emergency Managers Mutual Aid
EMS	Emergency Medical Services
EOC	Emergency Operations Center
EOP	Emergency Operations Plan
EPEDAT	Early Post Earthquake Damage Assessment Tool
EPI	Emergency Public Information
EPIC	Emergency Public Information Council
ESC	Emergency Services Coordinator
FAY	Federal Award Year
FDAA	Federal Disaster Assistance Administration
FEAT	Governor's Flood Emergency Action Team
FEMA	Federal Emergency Management Agency
FFY	Federal Fiscal Year
FIR	Final Inspection Reports
FIRESCOPE	Firefighting Resources of Southern California Organized for Potential Emergencies
FMA	Flood Management Assistance
FSR	Feasibility Study Report
FY	Fiscal Year
GIS	Geographical Information System
HAZMAT	Hazardous Materials
HAZMIT	Hazardous Mitigation
HAZUS	Hazards United States (an earthquake damage assessment prediction tool)
HAD	Housing and Community Development
HEICS	Hospital Emergency Incident Command System
HEPG	Hospital Emergency Planning Guidance
HIA	Hazard Identification and Analysis Unit

HMEP	Hazardous Materials Emergency Preparedness
HMGP	Hazard Mitigation Grant Program
IDE	Initial Damage Estimate
IA	Individual Assistance
IFG	Individual & Family Grant (program)
IRG	Incident Response Geographic Information System
IPA	Information and Public Affairs (of state Office of Emergency Services)
LAN	Local Area Network
LEMMA	Law Enforcement Master Mutual Aid
LEPC	Local Emergency Planning Committee
MARAC	Mutual Aid Regional Advisory Council
MHFP	Multi-Hazard Functional Plan
MHID	Multi-Hazard Identification
MOU	Memorandum of Understanding
NBC	Nuclear, Biological, Chemical
NEMA	National Emergency Management Agency
NEMIS	National Emergency Management Information System
NFIP	National Flood Insurance Program
NOAA	National Oceanic and Atmospheric Association
NPP	Nuclear Power Plant
NSF	National Science Foundation
NWS	National Weather Service
OA	Operational Area
OASIS	Operational Area Satellite Information System
OCC	Operations Coordination Center
OCD	Office of Civil Defense
OEP	Office of Emergency Planning
OES	California Governor's Office of Emergency Services
OSHPD	Office of Statewide Health Planning and Development
OSPR	Oil Spill Prevention and Response
PA	Public Assistance
PC	Personal Computer
PDA	Preliminary Damage Assessment
PIO	Public Information Office
POST	Police Officer Standards and Training
PPA/CA	Performance Partnership Agreement/Cooperative Agreement (FEMA)
PSA	Public Service Announcement
PTAB	Planning and Technological Assistance Branch
PTR	Project Time Report
RA	Regional Administrator (OES)
RADEF	Radiological Defense (program)
RAMP	Regional Assessment of Mitigation Priorities
RAPID	Railroad Accident Prevention & Immediate Deployment
RDO	Radiological Defense Officer
RDMHC	Regional Disaster Medical Health Coordinator
REOC	Regional Emergency Operations Center

REPI	Reserve Emergency Public Information
RES	Regional Emergency Staff
RIMS	Response Information Management System
RMP	Risk Management Plan
RPU	Radiological Preparedness Unit (OES)
RRT	Regional Response Team
SAM	State Administrative Manual
SARA	Superfund Amendments & Reauthorization Act
SAVP	Safety Assessment Volunteer Program
SBA	Small Business Administration
SCO	California State Controller's Office
SEMS	Standardized Emergency Management System
SEPIC	State Emergency Public Information Committee
SLA	State and Local Assistance
SONGS	San Onofre Nuclear Generating Station
SOP	Standard Operating Procedure
SWEPC	Statewide Emergency Planning Committee
TEC	Travel Expense Claim
TRU	Transuranic
TTT	Train the Trainer
UPA	Unified Program Account
UPS	Uninterrupted Power Source
USAR	Urban Search and Rescue
USGS	United States Geological Survey
WC	California State Warning Center
WAN	Wide Area Network
WIPP	Waste Isolation Pilot Project

## Appendix E: Glossary

Acceleration	The rate of change of velocity with respect to time. Acceleration due to gravity at the earth's surface is 9.8 meters per second squared. That means that every second that something falls toward the surface of earth its velocity increases by 9.8 meters per second.
Asset	Any manmade or natural feature that has value, including, but not limited to people; buildings; infrastructure like bridges, roads, and sewer and water systems; lifelines like electricity and communication resources; or environmental, cultural, or recreational features like parks, dunes, wetlands, or landmarks.
Base Flood	Flood that has a 1 percent probability of being equaled or exceeded in any given year. Also known as the 100-year flood.
Base Flood Elevation (BFE)	Elevation of the base flood in relation to a specified datum, such as the National Geodetic Vertical Datum of 1929. The Base Flood Elevation is used as the standard for the National Flood Insurance Program.
Bedrock	The solid rock that underlies loose material, such as soil, sand, clay, or gravel.
Building	A structure that is walled and roofed, principally above ground and permanently affixed to a site. The term includes a manufactured home on a permanent foundation on which the wheels and axles carry no weight.
Coastal High Hazard Area	Area, usually along an open coast, bay, or inlet that is subject to inundation by storm surge and, in some instances, wave action caused by storms or seismic sources.
Coastal Zones	The area along the shore where the ocean meets the land as the surface of the land rises above the ocean. This land/water interface includes barrier islands, estuaries, beaches, coastal wetlands, and land areas having direct drainage to the ocean.
Community Rating System (CRS)	An NFIP program that provides incentives for NFIP communities to complete activities that reduce flood hazard risk. When the community completes specified activities, the insurance premiums of policyholders in these communities are reduced.
Computer-Aided Design And Drafting (CADD)	A computerized system enabling quick and accurate electronic 2-D and 3-D drawings, topographic mapping, site plans, and profile/cross-section drawings.
Contour	A line of equal ground elevation on a topographic (contour) map.

Critical Facility	Facilities that are critical to the health and welfare of the population and that are especially important following hazard events. Critical facilities include, but are not limited to, shelters, police and fire stations, and hospitals.
Debris	The scattered remains of assets broken or destroyed in a hazard event. Debris caused by a wind or water hazard event can cause additional damage to other assets.
Digitize	To convert electronically points, lines, and area boundaries shown on maps into x, y coordinates (e.g., latitude and longitude, universal transverse mercator (UTM), or table coordinates) for use in computer applications.
Displacement Time	The average time (in days) which the building's occupants typically must operate from a temporary location while repairs are made to the original building due to damages resulting from a hazard event.
Duration	How long a hazard event lasts.
Earthquake	A sudden motion or trembling that is caused by a release of strain accumulated within or along the edge of earth's tectonic plates.
Erosion	Wearing away of the land surface by detachment and movement of soil and rock fragments, during a flood or storm or over a period of years, through the action of wind, water, or other geologic processes.
Erosion Hazard Area	Area anticipated being lost to shoreline retreat over a given period of time. The projected inland extent of the area is measured by multiplying the average annual long-term recession rate by the number of years desired.
Essential Facility	Elements important to ensure a full recovery of a community or state following a hazard event. These would include: government functions, major employers, banks, schools, and certain commercial establishments, such as grocery stores, hardware stores, and gas stations.
Extent	The size of an area affected by a hazard or hazard event.
Extratropical Cyclone	Cyclonic storm events like Nor'easters and severe winter low-pressure systems. Both West and East coasts can experience these non-tropical storms that produce gale-force winds and precipitation in the form of heavy rain or snow. These cyclonic storms, commonly called Nor'easters on the East Coast because of the direction of the storm winds, can last for several days and can be very large – 1,000-mile wide storms are not uncommon.
Fault	A fracture in the continuity of a rock formation caused by a shifting or dislodging of the earth's crust, in which adjacent surfaces are differentially displaced parallel to the plane of fracture.

Federal Emergency Management Agency (FEMA)	Independent agency created in 1978 to provide a single point of accountability for all Federal activities related to disaster mitigation and emergency preparedness, response and recovery.
Fire Potential Index (FPI)	Developed by USGS and USFS to assess and map fire hazard potential over broad areas. Based on such geographic information, national policy makers and on-the-ground fire managers established priorities for prevention activities in the defined area to reduce the risk of managed and wildfire ignition and spread. Prediction of fire hazard shortens the time between fire ignition and initial attack by enabling fire managers to pre-allocate and stage suppression forces to high fire risk areas.
Flash Flood	A flood event occurring with little or no warning where water levels rise at an extremely fast rate.
Flood	A general and temporary condition of partial or complete inundation of normally dry land areas from (1) the overflow of inland or tidal waters, (2) the unusual and rapid accumulation or runoff of surface waters from any source, or (3) mudflows or the sudden collapse of shoreline land.
Flood Depth	Height of the flood water surface above the ground surface.
Flood Elevation	Elevation of the water surface above an established datum, e.g. National Geodetic Vertical Datum of 1929, North American Vertical Datum of 1988, or Mean Sea Level.
Flood Hazard Area	The area shown to be inundated by a flood of a given magnitude on a map.
Flood Insurance Rate Map (FIRM)	Map of a community, prepared by the Federal Emergency Management Agency that shows both the special flood hazard areas and the risk premium zones applicable to the community.
Flood Insurance Study (FIS)	A study that provides an examination, evaluation, and determination of flood hazards and, if appropriate, corresponding water surface elevations in a community or communities.
Floodplain	Any land area, including watercourse, susceptible to partial or complete inundation by water from any source.
Frequency	A measure of how often events of a particular magnitude are expected to occur. Frequency describes how often a hazard of a specific magnitude, duration, and/or extent typically occurs, on average. Statistically, a hazard with a 100-year recurrence interval is expected to occur once every 100 years on average, and would have a 1 percent chance – its probability – of happening in any given year. The reliability of this information varies depending on the kind of hazard being considered.

Fujita Scale of Tornado Intensity	Rates tornadoes with numeric values from F0 to F5 based on tornado wind speed and damage sustained. An F0 indicates minimal damage such as broken tree limbs or signs, while and F5 indicated severe damage sustained.
Functional Downtime	The average time (in days) during which a function (business or service) is unable to provide its services due to a hazard event.
Geographic Area Impacted	The physical area in which the effects of the hazard are experienced.
Geographic Information Systems (GIS)	A computer software application that relates physical features on the earth to a database to be used for mapping and analysis.
Ground Motion	The vibration or shaking of the ground during an earthquake. When a fault ruptures, seismic waves radiate, causing the ground to vibrate. The severity of the vibration increases with the amount of energy released and decreases with distance from the causative fault or epicenter, but soft soils can further amplify ground motions
Hazard	A source of potential danger or adverse condition. Hazards in this how to series will include naturally occurring events such as floods, earthquakes, tornadoes, tsunami, coastal storms, landslides, and wildfires that strike populated areas. A natural event is a hazard when it has the potential to harm people or property.
Hazard Event	A specific occurrence of a particular type of hazard.
Hazard Identification	The process of identifying hazards that threaten an area.
Hazard Mitigation	Sustained actions taken to reduce or eliminate long-term risk from hazards and their effects.
Hazard Profile	A description of the physical characteristics of hazards and a determination of various descriptors including magnitude, duration, frequency, probability, and extent. In most cases, a community can most easily use these descriptors when they are recorded and displayed as maps.
HAZUS (Hazards U.S.)	A GIS-based nationally standardized earthquake loss estimation tool developed by FEMA.

Hurricane	An intense tropical cyclone, formed in the atmosphere over warm ocean areas, in which wind speeds reach 74-miles-per-hour or more and blow in a large spiral around a relatively calm center or "eye." Hurricanes develop over the north Atlantic Ocean, northeast Pacific Ocean, or the south Pacific Ocean east of 160°E longitude. Hurricane circulation is counter-clockwise in the Northern Hemisphere and clockwise in the Southern Hemisphere.
Hydrology	The science of dealing with the waters of the earth. A flood discharge is developed by a hydrologic study.
Infrastructure	Refers to the public services of a community that have a direct impact on the quality of life. Infrastructure includes communication technology such as phone lines or Internet access, vital services such as public water supplies and sewer treatment facilities, and includes an area's transportation system such as airports, heliports; highways, bridges, tunnels, roadbeds, overpasses, railways, bridges, rail yards, depots; and waterways, canals, locks, seaports, ferries, harbors, dry docks, piers and regional dams.
Intensity	A measure of the effects of a hazard event at a particular place.
Landslide	Downward movement of a slope and materials under the force of gravity.
Lateral Spreads	Develop on gentle slopes and entail the sidelong movement of large masses of soil as an underlying layer liquefies in a seismic event. The phenomenon that occurs when ground shaking causes loose soils to lose strength and act like viscous fluid. Liquefaction causes two types of ground failure: lateral spread and loss of bearing strength.
Liquefaction	Results when the soil supporting structures liquefies. This can cause structures to tip and topple.
Lowest Floor	Under the NFIP, the lowest floor of the lowest enclosed area (including basement) of a structure.
Magnitude	A measure of the strength of a hazard event. The magnitude (also referred to as severity) of a given hazard event is usually determined using technical measures specific to the hazard.
Mitigation Plan	A systematic evaluation of the nature and extent of vulnerability to the effects of natural hazards typically present in the state and includes a description of actions to minimize future vulnerability to hazards.
National Flood Insurance Program (NFIP)	Federal program created by Congress in 1968 that makes flood insurance available in communities that enact minimum floodplain management regulations in 44 CFR §60.3.

National Geodetic Vertical Datum of 1929 (NGVD)	Datum established in 1929 and used in the NFIP as a basis for measuring flood, ground, and structural elevations, previously referred to as Sea Level Datum or Mean Sea Level. The Base Flood Elevations shown on most of the Flood Insurance Rate Maps issued by the Federal Emergency Management Agency are referenced to NGVD.
National Weather Service (NWS)	Prepares and issues flood, severe weather, and coastal storm warnings and can provide technical assistance to Federal and state entities in preparing weather and flood warning plans.
Nor'easter	An extra-tropical cyclone producing gale-force winds and precipitation in the form of heavy snow or rain.
Outflow	Follows water inundation creating strong currents that rip at structures and pound them with debris, and erode beaches and coastal structures.
Planimetric	Describes maps that indicate only man-made features like buildings.
Planning	The act or process of making or carrying out plans; the establishment of goals, policies and procedures for a social or economic unit.
Probability	A statistical measure of the likelihood that a hazard event will occur.
Recurrence Interval	The time between hazard events of similar size in a given location. It is based on the probability that the given event will be equaled or exceeded in any given year.
Repetitive Loss Property	A property that is currently insured for which two or more National Flood Insurance Program losses (occurring more than ten days apart) of at least \$1000 each have been paid within any 10-year period since 1978.
Replacement Value	The cost of rebuilding a structure. This is usually expressed in terms of cost per square foot, and reflects the present-day cost of labor and materials to construct a building of a particular size, type and quality.
Richter Scale	A numerical scale of earthquake magnitude devised by seismologist C.F. Richter in 1935.
Risk	The estimated impact that a hazard would have on people, services, facilities, and structures in a community; the likelihood of a hazard event resulting in an adverse condition that causes injury or damage. Risk is often expressed in relative terms such as a high, moderate or low likelihood of sustaining damage above a particular threshold due to a specific type of hazard event. It also can be expressed in terms of potential monetary losses associated with the intensity of the hazard.
Riverine	Of or produced by a river.
Scale	A proportion used in determining a dimensional relationship; the ratio of the distance between two points on a map and the actual distance between the two points on the earth's surface.

Scarp	A steep slope.
Scour	Removal of soil or fill material by the flow of flood waters. The term is frequently used to describe storm-induced, localized conical erosion around pilings and other foundation supports where the obstruction of flow increases turbulence.
Seismicity	Describes the likelihood of an area being subject to earthquakes.
Special Flood Hazard Area (SFHA)	An area within a floodplain having a 1 percent or greater chance of flood occurrence in any given year (100-year floodplain); represented on Flood Insurance Rate Maps by darkly shaded areas with zone designations that include the letter A or V.
Stafford Act	The Robert T. Stafford Disaster Relief and Emergency Assistance Act, PL 100-107 was signed into law November 23, 1988 and amended the Disaster Relief Act of 1974, PL 93-288. The Stafford Act is the statutory authority for most Federal disaster response activities, especially as they pertain to FEMA and its programs.
State Hazard Mitigation Officer (SHMO)	The representative of state government who is the primary point of contact with FEMA, other state and Federal agencies, and local units of government in the planning and implementation of pre- and post-disaster mitigation activities.
Storm Surge	Rise in the water surface above normal water level on the open coast due to the action of wind stress and atmospheric pressure on the water surface.
Structure	Something constructed. (See also Building)
Substantial Damage	Damage of any origin sustained by a structure in a Special Flood Hazard Area whereby the cost of restoring the structure to its before-damaged condition would equal or exceeds 50 percent of the market value of the structure before the damage.
Super Typhoon	A typhoon with maximum sustained winds of 150 mph or more.
Surface Faulting	The differential movement of two sides of a fracture – in other words, the location where the ground breaks apart. The length, width, and displacement of the ground characterize surface faults.
Tectonic Plate	Torsionally rigid, thin segments of the earth's lithosphere that may be assumed to move horizontally and adjoin other plates. It is the friction between plate boundaries that cause seismic activity.
Topographic	Characterizes maps that show natural features and indicate the physical shape of the land using contour lines. These maps may also include manmade features.

Tornado	A violently rotating column of air extending from a thunderstorm to the ground.
Tropical Cyclone	A generic term for a cyclonic, low-pressure system over tropical or subtropical waters.
Tropical Depression	A tropical cyclone with maximum sustained winds of less than 39 mph.
Tropical Storm	A tropical cyclone with maximum sustained winds greater than 39 mph and less than 74 mph.
Tsunami	Great sea wave produced by submarine earth movement or volcanic eruption.
Typhoon	A special category of tropical cyclone peculiar to the western North Pacific Basin, frequently affecting areas in the vicinity of Guam and the North Mariana Islands. Typhoons whose maximum sustained winds attain or exceed 150 mph are called super typhoons.
Vulnerability	Describes how exposed or susceptible to damage an asset is. Vulnerability depends on an asset's construction, contents, and the economic value of its functions. Like indirect damages, the vulnerability of one element of the community is often related to the vulnerability of another. For example, many businesses depend on uninterrupted electrical power – if an electric substation is flooded, it will affect not only the substation itself, but a number of businesses as well. Often, indirect effects can be much more widespread and damaging than direct ones.
Vulnerability Assessment	The extent of injury and damage that may result from a hazard event of a given intensity in a given area. The vulnerability assessment should address impacts of hazard events on the existing and future built environment.
Water Displacement	When a large mass of earth on the ocean bottom sinks or uplifts, the column of water directly above it is displaced, forming the tsunami wave. The rate of displacement, motion of the ocean floor at the epicenter, the amount of displacement of the rupture zone, and the depth of water above the rupture zone all contribute to the intensity of the tsunami.
Wave Run-up	The height that the wave extends up to on steep shorelines, measured above a reference level (the normal height of the sea, corrected to the state of the tide at the time of wave arrival).
Wildfire	An uncontrolled fire spreading through vegetative fuels, exposing and possibly consuming structures.



## **Appendix O: Final Transmittals to County and State Library**

**City of Huntington Park 2020 Urban Water Management Plan**



## Department of Public Works

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June 23, 2021

TO: California State Library  
Government Publications Section  
P.O. Box 942837  
914 Capitol Mall  
Sacramento, CA 95814

RE: City of Huntington Park 2020 Urban Water Management Plan (UWMP)

In accordance with the requirements of the UWMP Act and the California Water Code Section 10644(a)(1), we are hereby submitting one electronic (PDF) copy of the 2020 UWMP for the City of Huntington Park on the attached CD. The 2020 UWMP has been prepared in accordance with the UWMP Act and was adopted by the City Council of Huntington Park on June 1<sup>st</sup>, 2021.

No action is required; this is simply for the County's records as required by the UWMP Act. Please retain this CD copy for your records.

Sincerely,

Cesar Roldan  
Director of Public Works



## Department of Public Works

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June 23, 2021

To: Los Angeles County Department of Public Works  
Attn: Mark Pestrella, Director  
900 South Fremont Avenue  
Alhambra, CA 91803

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Sincerely,

Cesar Roldan  
Director of Public Works

